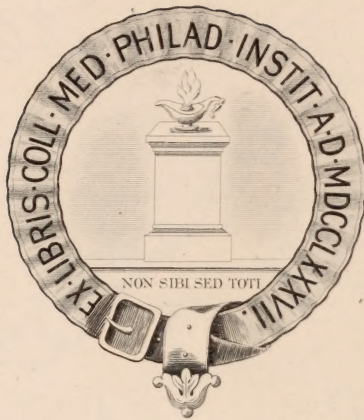




61339




Class _____ No _____

Presented by

H. A. Hoare, M.D.

1.50

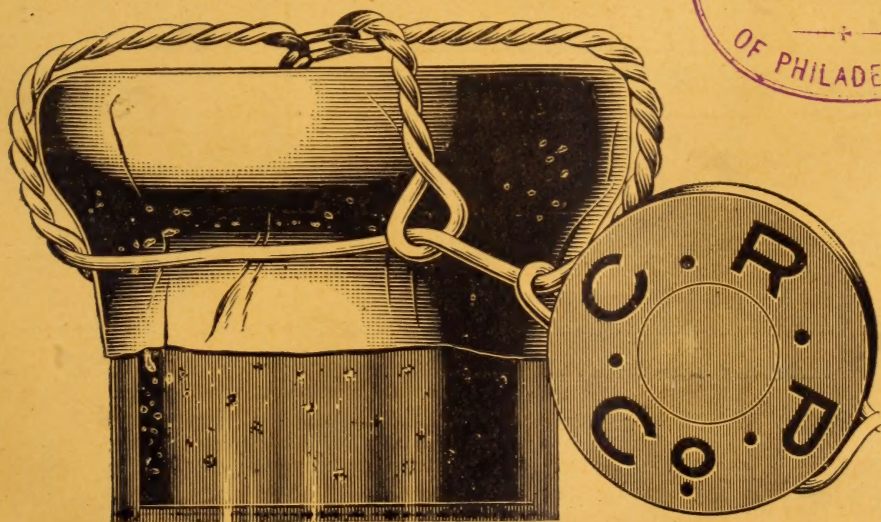
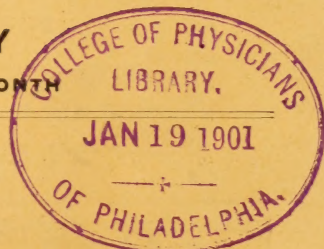


Digitized by the Internet Archive
in 2014



INTERSTATE MEDICAL JOURNAL

A MONTHLY MAGAZINE OF
MEDICINE AND SURGERY
PUBLISHED ON THE 15TH DAY OF EVERY MONTH



This is an enlargement of the top of a bottle of genuine Arsenauero or Mercauro (the TONIC ALTERNATIVES). Our bottles bear no dose label, we never send literature to laymen, thus they cannot even guess the dosage. The administration of these products is therefore entirely in the hands of medical practitioners. We protect you. If you protect us by insisting upon the presence of this seal, our combined efforts will protect your patient. Your medical skill and our chemical skill are entirely nullified if the patient obtains a spurious article.

CHAS. ROOME PARMELE CO., 36 PLATT ST., N. Y.

ENTERED IN THE POST-OFFICE AT ST. LOUIS, MO., AS SECOND-CLASS MATTER.

TABLE OF CONTENTS, PAGES IX AND X.

MAR 24 1902

Colden's LIQUID BEEF TONIC.

. . . SPECIAL ATTENTION . . .

of the Medical Profession is directed to this remarkable Curative Preparation, as it has been endorsed by THOUSANDS OF THE LEADING PHYSICIANS OF THE UNITED STATES, who are using it in their daily practice.

COLDEN'S LIQUID BEEF TONIC is invaluable in all forms of Wasting Diseases and in cases of convalescence from severe illness. It can also be depended upon with positive certainty of success for the cure of Nervous Weakness, Malarial Fever, Incipient Consumption, General Debility, etc.

COLDEN'S LIQUID BEEF TONIC

Is a reliable Food Medicine; rapidly finds its way into the circulation; arrests Decomposition of the Vital Tissues, and is agreeable to the most delicate stomach. To the physician, it is of incalculable value, as it gives the patient assurance of return to perfect health. *Sold by Druggists generally.*

The CHARLES N. CRITTENTON CO., General Agents,
Nos. 115 and 117 Fulton Street, NEW YORK.

Physician's Needs ^{are supplied by} The National Drug Co.

— MANUFACTURERS OF —

Standard and Special Pharmaceutical Preparations
Dealers in Drug and Chemical Sundries.

SPECIALTIES.

Soluble

Pills and Granules, Sugar, Gelatin or Chocolate Coated.
Compressed Tablets, Sugar Coated (various colors).
Tablet Triturates, quantities of 1000 put in Glass Stoppered
Hypodermic and Ophthalmic Tablets. [Bottles.
Dosimetric Granules, Uncoated.

Medicinal Lozenges, Fluid Extracts, Tinctures, Syrups, Elixirs, Wines, Waters, Solutions, Liniments, Ointments, Suppositories, Tasteless Cod Liver Oil Compound, Antiseptic Surgical Dressings, dry and liquid form. Febricine, powder or tablets; Elixir preparations of Iron and Manganese Peptonates, etc. Inquiries solicited. Catalogue on application.

Address

GEO. F. HARVEY, PRES.
LEON J. HARVEY, Secy.

THE NATIONAL DRUG CO.,

PHILADELPHIA, PA.

Interstate Medical Journal.

VOL. VIII., NO. 1. JANUARY, 1901.

Issued Monthly for One Dollar a Year.

EDITORIAL DEPARTMENT.

WARREN B. OUTTEN, M. D.,	-	-	-	EDITOR.
R. B. H. GRADWOHL, M. D.,	-	-	-	ASSOCIATE EDITOR.
OTHO F. BALL, M. D.,	-	-	-	MANAGING EDITOR.

Address all communications, news of medical interest, subscriptions, etc., to the INTERSTATE MEDICAL JOURNAL, CENTURY BUILDING, ST. LOUIS, MO.

MEDICINE AND SURGERY OF THE PAST ONE HUNDRED YEARS.

A hundred years ago the science of medicine and surgery was in its swaddling clothes. There were men who practiced medicine in those days, as there were for ages before, but it is a serious question whether these men, in their efforts to deal with disease, did not do more harm than good. The system of blood-letting, and the practice of giving enormous doses of poisonous medicines without understanding the diseases to be combated, were measures which were extremely taxing on the robust constitutions of our forefathers; and it is certain that many of them were sent to untimely graves by the overzealous treatment which was then in vogue.

The greatest strides which the past century witnessed in our special field were not in curative medicine, but in measures for the prevention of disease. At the beginning of the century the laws of sanitation were almost wholly unknown, and were universally disregarded. There were no adequate water-works or sewage systems in cities, and garbage and filth was allowed to accumulate as long as it did not interfere with traffic. Food and water were in consequence polluted. The direct relation of filth to disease was not understood. In consequence of this condition disease was rampant, and epidemics had full headway. This has all been changed—the principles of personal and public hygiene are well understood, and are constantly being put into more active practice.

The advances in surgery have been marvelous. A hundred years ago anesthesia was unknown. Asepsis was not recognized. Instruments were

crude, and surgical methods were barbarous. It is almost impossible to conceive how surgery could have been anything except a name. The surgery of to-day cannot be said to have descended from or to be in any way related to the old system. It is a new creation, and in its conservative practice is a priceless boon to mankind.

In the treatment of disease by purely medical methods, no such extraordinary improvements can be claimed. As regards the actual cure of most diseases we stand almost as helpless as our predecessors of a hundred years ago. Our results, however, are vastly superior to theirs, because of our reliance upon proper hygiene, nursing and diet, and adherence to the doctrine of non-interference except when remedies are positively indicated.

The brightest laurels of modern medicine are those attained by the great discoveries made in the etiology of disease, in bacteriology and in pathology. On these discoveries must be built our hopes for the future. Diagnosis is fast attaining perfection, and successful methods of treatment are being zealously sought for.

The latter part of the past century marked the beginning of a new epoch in medicine and surgery. The foundation has been well laid, and it is for our present generation to see that the superstructure is well begun.

AT DAWN OF THE TWENTIETH CENTURY.

Merely to name what has been accomplished in medicine and surgery during the last century would make a catalogue of goodly size. And to forecast, deductively, the next hundred years of progress in these branches would be a task that we have not time, space nor inclination to attempt. However, in a broad sense a few generalities may be indulged.

While the science of medicine was certainly not a young infant in 1801, its progress had been slow. Calomel, blood-letting and laudanum were the blessed trinity of the physician's faith.

The doctrine of Erasmus Darwin, physician, poet, philosopher, and physiologist, profoundly influenced the science of medicine in the early years of the nineteenth century. But his poetry, his philosophy, which was a foolish mixture of the doctrines of Stahl, Haller, and Hoffman the younger, were of little moment compared with his great work, "*Zöonomía*," which was published in the latter part of the eighteenth century.

But the chiefest gratitude owing Erasmus Darwin is for his labor of love. By that he made it possible for Charles Darwin to be a man so great that the century in which he lived was made immortal by his name.

It is difficult for the modern physician to realize the marvelous strides that his profession has made in recent years. It is only a little while ago that diseases were allowed to ravage the race practically unchecked. There was no defense against small-pox: the nature of most of the maladies was not understood. *Materia medica* and therapeutics were in the dark ages less than a hundred years ago, and surgery was in the savage state of its growth. Surgical instruments were strangely like implements

of torture. Anesthesia was scarcely more than a dream, bloodless operations unheard of, and crude amputations were the limit of operative skill. But all has changed. Cleanliness, hygiene, antiseptics, electricity, hypnotism, the shock-theory of medicine, and the cross-ray have produced wonderful changes in the practice of medicine and surgery. Microbes that have so long been the enemy of mankind will, during the next century, doubtless be pressed into service, even as the elements have been enslaved, and the transmutation of force will receive more attention than ever before. Nothing is truer than that science is the savior of mankind.

"Thou are the great physician. Thy touch hath given sight; thou hast made the lame to leap, the dumb to speak, and in the pallid cheek thy hand hath set the rose of health. Thou art the destroyer of pain. Thou 'hast given thy beloved sleep,' and wrapt in happy dreams the throbbing nerves of pain."

R. H. B.

THE COUNTRY DOCTOR.

Apropos of young century thoughts, we cannot do other than contrast some of the dead century notions with ideas and hopes of the new.

To many of us who were born and spend our lives in cities, the point of view relating to the medical profession held by a large number of the country laity is more or less striking and unique. The relations between the country doctor and his patients are, necessarily, different from those of city practice. Especially in remote rural regions the doctor is more than the title signifies. His position is distinctive; his personality is softened by a semi-mediæval aura. He is regarded as a seer. He is sincerely loved as a sort of auxiliary and extraordinary member of each family circle within the circumference of his benign ministrations. His oft-times homely ways and methods are considered far more safe than the methods of his city brother, and generally thought superior. Indeed, in many rural districts a strong prejudice obtains against city doctors. The idea is set forth in the following dialect verses by Dr. Ralcy Husted Bell, of this city:

THE COUNTRY DOCTOR.

I've heered of doctors smart as lightnin'
 In the colleges an' schools;
 I've seen 'em wearin' hats like stovepipes
 An' a-actin' like dam' fools;
 But I never seen 'em 'mount to nuthin'
 When the crib was wet with tears
 Of 'n anxious mother, bent an' weepin'
 Fer the babe that blessed her years.

Ye kin talk of science all you min' to,
 Of the progress science makes,
 Of how them city doodlet-doctors
 Do things, but I 'low it takes

A little more than stovepipe head-gear,
 Clo'es an' canes, an' hot-air talk,
 To cure the fever ager, or to
 Make the rhu-ma-tick to walk.

I've seen 'em thumpin' on the chest like
 Monkeys on a hive o' bees,
 A-listenin' thro' some tube er other
 Like a preacher on his knees;
 I've heered 'em talk o' microbes nestin'
 In the apex of the lung,
 Of stickin' serum in the backbone,
 Seen 'em peekin' at the tongue;

But when our Sairy Ann was taken
 With a sharp pain in her chest,
 An' all run down with hackin' coughin',
 Breakin' of her sleep an' rest—
 I notice *she* warn't helped by science
 Of that hifaluten doc
 That tended her, more'n flannel wrappin's
 Or her neck tied with a soc.

An' so I've come to this conclusion—
 Jes' as hones' as could be—
 The good ol'-fashioned country doctor,
He is good enough for me!
 We may be wrong—but my ol' woman,
 She agrees with me in that
 Mos' all the science high-toned doctors
 Have, they carry in their hat.

THE PHYSICIAN OF THE FUTURE.

There will be physicians and physicians at the close of the twentieth century, just as there are to-day. But the tendency will be strongly toward the broader type. Most likely there will then be no "general practitioners." But specialists will not be narrowed by their special work. On the contrary, there will be more time for investigation, reflection, thought. The best doctor will be the most broadly cultured doctor. He will not be a slave, but a master. He will be on terms of intimate acquaintance with the great endeavors and successes of mankind. He will know something of art, of literature, of astronomy. What are to us the ultimate reaches of science will to him be the far, low foothills. In that good day the doctor will not lose heart in the wilderness and detail of his work. The best doctor will be the most soulful doctor—the most sympa-

thetic gentleman. He will have lost, we hope, all taint of cruelty and savagery which now distinguishes the asshood of the vivisectionist from the manhood of professional culture and decency of feeling. That kind of doctor will be welcomed by the world; and blessed be the day of his multitudinous arrival!

B.

ANOTHER ELIXIR OF LIFE.

A great furor is being stirred up in the daily press over a new "elixir of life." This time the substance to be used is common phosphate of sodium, and great things are claimed for it. Men who have passed into the evening of life with broken health are said to be rejuvenated by injections of this substance, and its advocates seem to confidently expect that its use will do away with disease and prolong life almost indefinitely.

From time immemorial men have sought for means to stay the hands of Death, but every such attempt has resulted only in misfortune, disappointment and reproach. For ages the alchemists vainly labored to produce a universal panacea which would conquer disease in all its forms and give to man an endless lease on life, but they evolved only pretentions which resulted in their own undoing.

Great journeys into unknown lands were undertaken in the days when men were superstitious and ignorant enough to believe in tales of magic waters; and they were no more superstitious and ignorant than men who are to-day seeking to arrest human decay by the use of nostrums. Ponce de Leon, braving the dangers of swamps and savage people in his search for the Fountain of Youth, was no more credulous than the flocks who hail with joy every new "elixir of life" which is placed upon the market.

On the strength of promised immortality from use of this latest elixir of life we cannot consistently advise our readers to put off until the next century anything which can be done during that just commenced.

THE DEATH OF OLLIVIER.

The medical profession, and that part of it which we know as the school of surgery, has lost in the death of Louis Xavier-Eduard Ollivier, of Lyons, France, a pioneer and a worker even up to death. Ollivier was one of the wonderful pre-antiseptic surgeons who did not fall back into "innocuous desuetude" when that method was advocated and gained ascendancy. He kept up with the tide and stemmed it. Ollivier's life-work has been one long series of successes in the surgical domain, both as an operator and as an original investigator along practical surgical lines. His main work in operative surgery has been along the line of periosteal sutures, such as was advocated in his article which appeared in 1873 on the method of suturing the periosteum to the joint capsule. By his conscientious work along this line he definitely proved the osteogenetic characteristics of the periosteum; and how valuable that discovery needs no further

mention. It can be said to his credit that the Lyonnaise school, of which Ollivier was the founder, was the first to take up the new subject of listerism and apply it. He recognized that the advance of this antiseptic method would greatly facilitate that work which interested him most—*i. e.*, the repair of bones.

Ollivier has been well-deservedly honored by his colleagues the world over. He has been admitted to scientific medical societies in all countries—Germany, America, England, Russia and France. But last summer he was made Fellow of the Royal College of Surgeons. The Commander-Cross of the Legion of Honor of France was conferred on him personally by President Carnot, just before the latter was murdered. May the memory of this great man live long after him. May his noble example be a watch-light for the surgical world of to-day. The medical profession should ever revere the names of such men as Louis Xavier-Eduard Ollivier.

G.

THE CZAR'S ILLNESS.

The whole European world has been greatly worked up for the past few weeks over the illness of the ruler of all the Russias, Nicholas. At first it was declared that he was suffering with an attack of influenza, but later bulletins by the court physicians and consultants established the diagnosis of typhoid fever. In the second week of his sickness the Widal test of his blood was made and the diagnosis bacteriologically confirmed, so that now no doubt exists in the minds of the physicians in attendance but that the czar has typhoid fever. From a perusal of the temperature and pulse bulletins which are daily given out it is evident that the course of the disease is a mild one, and that the "exponent and champion of peace" will speedily be convalescent. The world at large may well thank the physicians who are treating Czar Nicholas for saving the life of this esteemed monarch. It is well known that he has ever been an exponent of peace, and that he has carefully avoided all wrangles at arms that have come up since he has occupied the great throne at St. Petersburg. It seems to be his steadfast aim to promote peace and harmony throughout the whole civilized world, for he seems to have recognized the foolhardiness of settling disputes with the sword. He may well be known as the "great arbitrator."

In connection with his sickness, intimations have been made that he has been infected with typhoid fever through the machinations of the Nihilists. These rumors creep into the European press every now and then, and although no definite information goes with them, still one cannot but think that he may possibly have been infected by drinking or eating infected food. Knowing the care exercised in connection with the imperial household, it does seem rather strange that he should have typhoid fever, a disease of distinct origin and causation. It is not our task to explain how this thing might have come to pass. We mention it for what it is worth. It would be truly lamentable were it true. It is a

fearful thing to consider what might not be done, by unscrupulous persons who might avail themselves of bacteriologic science for nefarious purposes. These people could thereby utilize weapons far more deadly than the assassin's knife or the Nihilist's bomb. And yet, we cannot but expect that the science of bacteriology will be just as illegally and just as nefariously pilched from as has been done with chemistry and other natural sciences. The community is truly powerless against it. Strict surveillance on the part of laboratory workers of their cultures may help to stay this influence. We cannot think of the possibility of "buying" the men themselves; we are too proud of our brethren to imagine a single one of them capable of such perfidy.

G.

CONCERNING THE PHYSIOLOGIC FUNCTION OF THE SPLEEN.

Some new light has been thrown on the question of function of the spleen by the work of G. Jawein, which recently appeared in *Virchow's Archiv*, Band 161, Heft 3. This author tried to ascertain the cause of enlargement of the spleen in cases of acute poisoning and in cases of acute infectious diseases, hoping in that way to get some idea of its normal physiologic function. How well he succeeded may be seen by the results of his work. His work was essentially an experimental investigation with dogs poisoned with chlorate of potassium, chlorate of sodium and with toluylendiamin. He established the fact which, by the way, has been frequently noted by others, that the enlargement of the spleen in these acute cases depends on a destruction of the erythrocytes. By means of the collection of these destroyed erythrocytes in the spleen there follows a hypertrophy and hyperplasia of the pulpic mass. In other words, we see a functional hypertrophy of the pulp from irritative influences. It is a common pathologic experience, and many analogies could be pointed out. The same condition holds true in acute infectious diseases where there is a destruction of the red blood corpuscles and consequently an irritative influence on the splenic pulp with functional enlargement of the whole organ. From these findings it is natural to conclude that the principal function of the spleen from a physiologic point of view is that of a filter for the blood, and that if it has any selective affinity at all for preventing bodily tissue from passing through this self-same filter, its action can be seen with the red blood corpuscles in particular.

SOME MORE INFORMATION ABOUT THE INFLUENZA BACILLUS.

While it has been well known for some time that the Cannon-Pfeiffer bacillus is the essential etiologic factor in the production of the disease influenza, still all points pertaining to manner of causation, dissemination of the disease, etc., have not been pointed out, so that we nail with pleasure any interesting facts on the subject. In a recent publication in the *Riforma Med.*, 1900, No. 80-82, Cantani, of Naples, devotes some space to this subject. From experimental investigations made by him we may

conclude that the individual may retain the influenza bacillus in his mouth for some time, and that at any time it is liable to change its saprophytic existence into a parasitic one and produce a fresh attack of the disease. Fresh attacks of the disease in individuals who have had it and have not been exposed to reinfection may be thus explained. Cantani also definitely proved by sterilizing preparations of the influenza bacillus and then injecting them into the body without producing the disease, that the disease is due to a bacillus which carries the toxin within itself, not to toxin produced and thrown off by the bacillus.

There is a form of influenza which has been called "pseudo-influenza." The name is convenient, but yet is a misnomer, for the disease is essentially different from the real disease in its etiology, although in clinical behavior it much resembles it. The name of "influenzasimilibacillus" has been suggested for the organism which produces this pseudo form, but yet we hardly see why we should accept it, as, so far as we know, there are several different organisms which can imitate the Cannon-Pfeiffer bacillus in producing an "influenzaform" disease. 'Twere better to have but one influenza bacillus and discard the group "pseudo-influenza" bacillus. Such nomenclature invariably establishes erroneous impressions and leads to nothing but confusion in the end.

BELLEVUE HOSPITAL HORRORS.

The horrors of Bellevue Hospital, as told in the lay press, match the cruelties of the Inquisition. Surely, there must be some mistake. Let us hope for the sake of human decency, for the honor of the medical profession, for the good opinion of nurses, that it is a horrible mistake. It is hard to think that good old Bellevue is infested with doctors and nurses capable of cold-blooded murder and the fiendish cruelty of an Apache band of raiders. No, no, it is too horrible!

DECREASE OF DEATH-RATE IN THE NINETEENTH CENTURY.

During the past century, owing to the advancement of medical knowledge and a better understanding of the conditions affecting life, the annual death-rate of the civilized nations has been lowered from twenty-eight to twenty-four persons in every thousand, and a marked increase in the average length of human life also resulted.

A TWENTIETH CENTURY WONDER.

Recently a process has been discovered by a Frenchman for the "reduction of wood to a molten condition." By this means it is said that wood becomes very hard, susceptible to high polish, impervious to water and acids, and a non-conductor of electricity. Houses made of molten wood therefore will have many advantages. Lightning rods will be no longer needed, and with their passing will go much unique timber with which funny structures are built.

ORIGINAL ARTICLES.

THE NEPHRITIDES OF CHILDREN.

BY R. B. H. GRADWOHL, M. D., of St. Louis, Missouri.

WE KNOW that the etiology of nephritides in children is about the same as that for the adult, with a few exceptions. For instance, we have some etiologic factors in childhood which do not hold good for the adult, and likewise we have some factors in the adult that do not hold good for the child. Among the first factors of etiology that are commonly mentioned as being productive of nephritis in children are drugs. The manner of their action in children is not brought about exactly in the same way that we see in the adult. Here in Germany, for instance, there are quite a number of cases of scabies, the routine treatment of which is with balsams of various kinds. It is not uncommon here, therefore, to see nephritis produced by the absorption of these balsams during the course of treatment of a case of scabies. We also see nephritis produced here among both adults and children by treatment with drugs, such as potassium iodidi, potassium chloratis, acidium carbolici, etc.

The nephritides of an acute type which are especially important, however, are those which follow or accompany the acute infectious diseases. In first order, let us speak of the nephritis which goes with scarlatina. It is not always the case of scarlatina which has the severest rash, or the severest cerebral symptoms, which is accompanied or followed by the severest nephritis. The severest forms of acute nephritis in connection with scarlet fever which the writer has seen are those which occur in cases of scarlet fever with scarcely any rash at all. I mean those cases of scarlet fever with very little or no rash, but with severe throat symptoms; the so-called cases of *scarlatina sine exanthemata*. It is in this type of the disease that we see the severest of the renal complications, the gravest cases of glomerulo-nephritis or nephritis hemorrhagica acuta.

The evidence that a nephritis is taking place is often a slight elevation of the febrile temperature already present, according to Strumpell, but this is not always observed. These children complain of lumbar pains. If we examine the urine, we find the characteristic departure from the normal there present: a cloudy, dark or blood-colored urine, of a specific gravity of from 1015 to 1025, and containing a good deal of the albumins. Should we examine the sediment obtained by centrifugalization, we find many grades of hyaline casts, with white and red blood corpuscles, with detritus, hæmatodin crystals, bacteria, and renal epithelia. Especially characteristic of this form of nephritis is the presence of the waxy casts, and, if the case be of the hæmorrhagic type, then too do we find

blood casts of distinct form. It is said by many writers that it is rather uncommon to find the epithelia of the renal tubules present in the urine, but in the writer's experience, these organic constituents are relatively common.

In first order we wish to call attention to the necessity of making urinary analyses of children's urines from the *whole twenty-four hours' amount*. It is a fact that if the urine be chemically or microscopically examined in the morning, after the children have been resting quietly during the night, that it is not probable that much information of a definite nature will be revealed; if, on the contrary, the urine be examined at nightfall, after a day's restlessness and activity, then will the organic parts just described be found. Hence, it is of paramount importance to estimate from the whole twenty-four hours' amount so that logical conclusions may be deducted in any given case. Another reason for collecting the whole day's urine is for the sake of ascertaining the amount passed by the child. It is relatively diminished in this disease, and we must be ever on the alert for the beginning of anuria. This calls for urgent treatment and energetic assistance, else quick dissolution will follow.

Another point that needs attention is the fact that amount of albumins present in the urine has nothing to do, proportionately, with the amount of edema. We know that the edema does not depend upon the existence of albuminuria directly. It depends upon the action of the retained toxins on the intima of the blood vessels, which are so affected that the watery constituents of the blood escape into the outlying tissues. Again, we may state that uremia and albuminuria do not go hand-in-hand, relatively speaking. Quite often do we find the beginning of uremia with but slight albuminuria, and for the same reason uremia, in the light of our present knowledge on the subject, depends upon the toxic effect upon nervous tissue of the noxious products which fail to be excreted from the body when there is a renal insufficiency.

Nephritis hæmorrhagica acuta, complicating scarlatina, offers a much better prognosis than does the nephritis of an acute type accompanied by pale urine, not much albumin, etc.—glomerulo-nephritis acuta. We see cases of hæmorrhagic nephritis with a good deal of blood and albumin clearing up in from two to three weeks, while the other forms with pale urine, etc., last from four to eight weeks, and may then be followed by a chronic stage.

Uremia in scarlatinal nephritis may occur at any time, making itself manifest by vomiting, headache, convulsions, amaurosis. The amaurosis of scarlatinal uremia gives a good prognosis, and should not afford great anxiety beyond that which goes with the onset of an uremic state of any kind. If the pupillary reflex is present with this amaurosis, then the prognosis is not to be considered as being bad. If, however, there is an absence of the pupillary reflex, then our prognostic star should loom no more in the ascendant. Absence of the pupillary reflex then betokens an

onset of *edema cerebri*. With this goes retinitis, etc., and probable death. The importance of the pupillary reflex in such states of uremia can thus be seen and should be ever tested.

A few words might be said with reference to the nephritis of scarlatina with albuminuria. This state was first described by Henoch. Litten and others have later described it. It is described as a nephritis without albuminuria, with edema, with uremic symptoms at times. Wherever such cases have come to autopsy, almost constantly glomerulo-nephritis has been found. In these cases severe angina with no eruption is constantly present. The question then arises: are these cases of scarlet fever or are they simply cases of angina follicularis with nephritic complications? A rather good answer to this question might be that they are really cases of scarlatina sine exanthemata, inasmuch as the writer has found in such cases the diplococcus scarlatinæ in the flowing blood. A notable instance of this was the writer's experience last winter with some cases of severe angina at the Female Hospital in St. Louis. There were several true cases of scarlatina cum exanthemata at this hospital, where the diplococcus scarlatinæ was demonstrated in cultures from the blood, throat and urine. Later there arose in this institution quite a number of cases of severe angina among attendants who had been nursing these scarlatinal patients, and, as already stated, the scarlatinal diplococcus was found present. Similar cases have been reported by Class, of Chicago. These bacteriologic features rather incline us to settle this much-mooted question in this wise: that these severe anginae are scarlatinal anginae. And a view of the situation from all sides certainly entitles us to the belief that our stand is well sustained.

Another disease which is very frequently complicated with nephritis is diphtheria. The statisticians tell us that while in scarlatina thirty per cent. of the cases get nephritis, in diphtheria fully fifty per cent. or more are complicated with nephritis. Clinical experience certainly make these figures seem truthful. Another feature of the nephritis of diphtheria is that it comes on early in the disease, usually about the fourth or the fifth day. In scarlatina it is the rule to find it coming on later in the course of the disease. Another feature differing widely from the scarlatinal nephritis which is possessed by the diphtheritic form is that we very seldom see hemorrhagic nephritis in cases of diphtheria. In other words, nephritis hæmorrhagica acuta in diphtheria is an *avis rarissime*. Again, another feature differing from the scarlatinal nephritis is that we never see edema or uremia in cases of diphtheritic nephritis. We can say that when the urine of a case of diphtheria complicated with nephritis contains more than two per cent. of albumins, then the prognosis becomes exceedingly serious by reason of the fact that the kidney may be likened to the dial on the steam-gauge of the toxic state, and the passage of the dial beyond the two per cent. albumins containing urine marks the advent of more toxin than the body can withstand.

Nephritis after measles is very seldom. It sometimes occurs with pertussis convulsiva, with parotiditis epidemica, with erysipelas or malaria, although the last form is seldom met with in Germany. It is more common in the United States' malarious districts. The nephritis in varicella is not common. About thirty cases are reported in literature, including the original case reported by Henoch, in 1874.

Varicellar nephritides come at any time between the fifth and the twenty-first day of the disease proper. It may be of various forms, although we must call attention to the fact that, in contrast to the mildness of the nephritis of diphtheria, that of varicella is often severe, with edema, with uremia and its consequences. Varicellar children should always be kept in bed eight days after the subsidence of the active symptoms, so that in the event of a complicating nephritis the child may be given the benefit of rest and adequate means of relief. Varicellar children, therefore, should receive no alcoholic stimulation, so that no undue excitement may be given to the renal epithelia, whereby the slumbering toxins may be kept from wreaking their toxic influences on the kidney tissues.

Among other diseases of infancy and childhood where we meet nephritis are the gastro-intestinal disorders, the "darmkatarrh" of the German pediatricists, enteritis, gastro-enteritis, etc. Enteritis is not always followed by albuminuria. When it does occur it is due to the absorption of ptomaines from the intestinal tract, or else to the circulation of the toxins of the disease-producing organism at work. We see it in cholera infantum particularly. These children are seriously ill. There is anuria; the urine withdrawn by catheterization shows the usual organic evidences of severe nephritis. There is the facies Hippocratica. And here we must look for uremia. We see in cholera infantum, as an index of the uremic state, the hydrocephaloid of Marshall Hall. Another form of nephritis is that which comes a few weeks after a case of enteritis. It is that variety which we have already spoken of: nephritis sine albuminuria. Some few cases have albuminuria, but the majority simply have edema and pallor, etc. These cases we must state occur for the most part in poorly nourished children.

An interesting form of nephritis is that which the Italian writers have described: the nephritis occurring in connection with eczema. It is a rather common clinical experience here, in Germany, to find cases of nephritis in children who come to the physician for treatment of a case of eczema. In every case of eczema which comes to the pediatricist for treatment, he should examine the urine chemically and microscopically. The explanation for the complication of nephritis with eczema is that it is due to the absorption of pus or toxins from the local skin lesions which in turn react upon the kidney tissue. Another logical suggestion in explanation of this nephritis and eczema is that the nephritis is not caused by the eczema, but that it occurs first and the eczema follows later as a complication of the nephritis. Again, we wish to call attention to the necessity of examining the urine of the children for the whole twenty-four hours.

This is especially necessary in our endeavors to establish a nephritis in a case of eczema where albumin may only be found present after the child has been stirring around during the past, perhaps having completely disappeared in the morning after the night's rest in bed.

A form of nephritis that we might speak of is the nephritis of anemic children. These children present the usual blood changes of anemia, have headaches, poor appetites, etc. They show albuminuria, but no casts. They should be put to bed until the albuminuria disappears, with proper treatment, of course, for the anemic state. This albuminuria in anemia may be an expression of the existence of a state of chronic nephritis, or it may mean alone albumins coming from the pelvis of the kidney or from the calyces and not from the parenchyma. Therefore, in all these cases of "school anemia," as it is very properly called by the Germans, examine the urine for albumins.

A rather peculiar form of nephritis of children is that described by Heubner as his "autotische" nephritis, or secretory nephritis. It comes and goes. When the child goes to bed it disappears. When he gets out of bed for a day or two it returns.

In conclusion, it may be said that although it is seldom the case that chronic nephritis is seen in children, it occasionally follows the scarlatinal type. When we do see a chronic case of children it is usually of the chronic interstitial type of the pathologist. I do not wish to go into the therapy of the nephritis. It is practically the same as that for the adult and needs no special discussion. What I have stated has been mainly intended as a presentation of some of the different pictures that we see in children who get acute nephritis.

Berlin, Germany, December 15, 1900.

Carbolic acid is regaining favor as an antiseptic. It may be used pure in the treatment of suppurating areas. When pure phenol is used on an open sore, or injected into an abscess cavity, it should be followed in a few seconds by an application of absolute alcohol, which neutralizes the action of the drug and inhibits further escharotic action. Many surgeons use pure phenol in sterilizing the hands, following its use by immediate immersion of the hands in alcohol.

Tincture of gelsemium, in three-minim doses, will frequently give most gratifying results in neuralgias about the face and head.

THE SURGERY AND MEDICINE OF OTHER TIMES.

BY THOMAS C. MINOR, M. D., of Cincinnati, Ohio.

UNDER the above title Dr. Hamonic has just published a most interesting work (Paris, 1900) that reviews his collection exhibited on the Champ-de-Mars, and is a most curious revelation, especially as regards the first chapters of the book. Therein is found the description of a large number of instruments of ancient manufacture, dating back to the Greek and Roman epochs, and these are as interesting as those in the famous collection at Naples secured from the ruins of Pompeii. Then we are led down the pleasant paths of the seventeenth century with an exposition of antique microscopes and quaint instruments—a veritable joy for the medical antiquarian. Dr. Hamonic has, in his retrospective of surgical instruments, pictured all these curiosities. It is to be regretted that the jury on prize exhibits failed to appreciate the high value of this collection, so that our distinguished *confrere* did not obtain the honorable distinction of a medal, and even the expenses of his valuable exhibit were paid by the collector. But of what value are such medals? Dr. Hamonic made a most meritorious exhibit, and all true lovers of medicine and surgery must bow down before the splendors of this little museum, certainly one of the most unique in all the world; one that can never again be duplicated.

These surgical treasures collected by Dr. Hamonic, especially those of the Greek and Roman periods, with their different types, lead us to marvel at the ingenuity of the human mind even in days of far antiquity. Yet we do not know which to admire the most, the patience and ardor of the collector or the beauty and richness of the collection, from the collyrium boxes of ancient Egypt to the design of a modern leg made two centuries before the era of Christianity. There, for instance, is the strigile of Thebes. There, too, the odor pots of the ancient Greek period, and the cautery from Olympus, with its cases, perhaps used by the ancient gods. There, too, we find the small Greek surgical trousse, discovered at ancient Pireus; a curette from Sur (the antique Tyre of the Phenicians); we find, too, surgical cases from everywhere—from Ephesus (Asia Minor), from Cana of Galilee; a cruse, also, of sacred ointment hundreds of years old, from Phenicia. For a more recent epoch we might mention a Merovingian surgical case from Cambrai, a primitive set of instruments in bronze; likewise one from antique Perrone, of the Gallo-Roman epoch; together with cupping instruments of the old Roman periods. We could never finish the enumeration of all the surgical instruments belonging to the middle ages. We see microscopes of the epoch of Louis XIII.; the amputating knife of Guy de Chauliac, together with many amputation and trepanning cases older than those in the Orbila museum. Wooden legs of the seventeenth century abound; orthopedic instruments of the sixteenth century are numerous. We note vaginal dilators of the fourteenth century—the renaissance,

seventeenth century, and those in the times of Louis XIII. and Louis XIV. An anatomical bistoury that was used on Louis XIV. is also in this collection. A wooden statuette, representing a circumcision in the fifteenth century, also attracts attention. A figure of the same kind is among the celebrated sculptures of the Hotel de Ville at Brussels, Belgium. As before stated, this collection is unique and merits public attention. Chicago University should purchase it before Johns Hopkins secures it.

Here we find the ancestor of the scalpel, the primitive stone knife of the stone age, employed doubtless by the first races of men. But let us pass on to the age of bronze, with the green of the passing ages, the surgical instruments of the days of the ancient Pharaohs, dug up by Clot Bey from various Egyptian ruins. Here they are side by side with the old Roman instruments found in the ruins of Herculaneum, the doctors' tools buried for ages in the ashes of Mount Vesuvius. Instruments that date back to the year 79 of our era. Let us note, too, the collection of glass eyes: "What an interesting history is that of artificial eyes," remarked Dr. Jongea. According to the erudites of archeology, artificial eyes date back to the days of Ptolemy Philadelphus, three centuries before the birth of Christ. The original artificial eye was made of copper, silver and even of gold. They have often been found in the orbits of ancient mummies, where are likewise found those curious cupules of white enameled silver where the iris is represented by a dark circle, and the pupil by a black projecting point. They ornamented statues with them; and, if we are to believe Pliny, over the tomb of Hermias, Prince of Cyprus, was a watchful lion, sitting, the artificial emerald eyes of which flashed in the darkness." This was before the Greeks and Romans knew of artificial glass eyes. Here, too, we find very curious Japanese dolls, with curious eyes, together with a series of lines showing the spots where acupuncture must be practiced; and we see, too, quaint orthopedic instruments for hunchbacks; also clyster pipes made in impermeable cloth. Here is a chance for some Yankee inventor to make a cheap syringe on old ancient Japanese lines out of textile fabric.

Let us now go on to lithotrity, the crushing of calculi, and we notice the first hypodermic syringe there constructed on the same lines as the Pravoz. Let us note, too, in passing, a glass case containing instruments in which we follow the evolutions of Tarnier's forceps; certainly we do not see in this collection the celebrated "royal bistoury," invented by the surgeon Felix to cut out the fistula in ano of Louis XIV., but we do find the instruments used in the autopsy made on Napoleon I., the post-mortem case of Dr. Automarchi, together with the famous trousse presented by Queen Amelia to Dr. Bandens, of which each instrument is a most distinct work of art, with shell handle, ornamented in gold and the monogram of the surgeon. Side by side with surgical mirrors is a series of old engravings showing the physician across the ages of time. Let us cite a few ex-

amples from this curious collection: Softly seated on a quiet mule that is being prodded by gigantic spurs, we behold the haste made by a middle age cavalier, *excellentissimus medicus* of the legend. Is this not a faithful portraiture of "Master Rondibilis, Physician," going on a visit to his creator, the joyous old priest of Mendon, ex-confrere in the art of Hippocrates, the good liver of the immortal Rabelais? On one side of this worthy man we read, engraved:

"How a dean followed four faculties."

A true physician of Moliere, as disciple, undoubtedly, of the very learned Thomas Diaborius, a skull-cap exactly perched upon the whitened wig, with the folds of his toga opened and his capon-lined belly on one side—or, an addition to the tableau, a table on which smokes a goblet of liquid charged with "*peccant humors*," a mouth, *ore-rotundo*, of the *doctor doctrixmus*, from which issues half a dozen barbed arrows with the significant words: *bleeding, leeches, purging, cathartics, emetics, and diaphoretics*.

Pictures of ancient surgeons cutting off legs and arms *secundum artem*—a portrait of a dropsical dame, like the one in the legend of that famous picture by Gerard Dow that hangs in the museum of the Louvre. There, too, that famous oculistic picture, where the beautiful patient eyes the oculist in an overamorous manner:

"There is, in eyes, sometimes, a little spot
That warns the oculist—'Oh! touch me not.'
'There's amorous fire in my tingling brain,' etc.

Finally, the physician of the first quarter of the nineteenth century, with his fur collar cape, with a cod-fish queue—a meditative gentleman of that type that always held a large cane under the chin, with the very ethical notice: "This gentleman does not post his name on every wall; sells no secret remedies; never promises a perfect cure; an honest, conscientious man, as benevolent as he is active; he has made no fortune at medicine, although he has practiced over thirty years to acquire a modest competency. Can such a high-toned physician ever be classed with charlatans?"

Oh! this wonderful Paris Exposition—only a memory now, alas! Strange fact, that one of the most observed things in all this collection, yet unenumerated, was a modern splint, made of platinum, with tiny germ-proof glass windows, through which the surgeon can study the process of healing in cases of compound comminuted fracture. This was in the private collection of a noted instrument maker, and bore a patent mark of some doctor out in the northwestern States of America—either Michigan, or perhaps Wisconsin—the invention of a Doctor Shears, if we remember rightly. A surgeon connected with the Russian embassy and

an Italian naval surgeon made copies of this for future use in their respective countries. It was certainly the most unique surgical appliance in the Exposition of all the modern appliances, and attracted great attention from the men who attended the "International Medical Convention." This Yankee invention will probably be claimed, later on, by some eminent surgeon at Saint Petersburg or Rome; *nous verrons*. Be that as it may, it was the one unique and most practical of all the modern surgical inventions included in this vast and interesting collection.

ASTHMA.¹

BY R. ALEXANDER BATE, A. B., M. D., of Louisville, Ky.

Assistant to the Chair of the Principles and Practice of Medicine and Clinical Medicine, Hospital College of Medicine, Louisville, Kentucky.

ASTHMA is a disorder of nutrition, dependent upon the arthritic diathesis, and is characterized by paroxysmal dyspnœa due to spasmodic contraction of the bronchial tubes.

The spasmodic contractions, according to Loomis, are due to a neurosis, which depends upon the existence of a peculiar diathesis. Troussou, Salter, and others, likewise speak of asthma as a diathetic neurosis.

Haig attributes asthma to the effect of uric acid upon the circulation in the thorax, and shows that the paroxysms correspond to the natural fluctuations in the excretion of uric acid.

Modern opinion seems to consider asthma a neurosis of the branches of the pulmonary plexus due to arthritism.

In nasal or hay asthma, it is believed, uric-acidæmia so alters the nutrition of the speno-palatine branches as to cause temporary paralysis, thus inducing hyperæsthesia and turgescence of the nasal mucosa.

In bronchial asthma, uric acid in the blood so alters nutrition as to cause a neurosis of the branches of the pulmonary plexus, thus inducing hyperæsthesia and engorgement of the bronchial mucosa, the spasmodic contraction of the muscular fibers, and various manifestations of deranged katabolism.

The manifestations of functional derangements are the diminished quantity of oxygen and water excreted by the lungs, also the fatty acids, the octahedral crystals of Leydan, and the spirals of Curschmann found in the expectoration.

Loomis found the oxygen of the expired air was almost entirely replaced by carbonic acid. The exact pathology of the gravel-like bodies and mucous pearls of the sputum is not clear.

¹ Read before the Mississippi Valley Medical Association, Asheville, N. C., October 9th, 10th and 11th, and published exclusively in INTERSTATE MEDICAL JOURNAL.

Asthma frequently alternates with neuralgia, migraine, angina and cardialgia—all diseases due to uric-acidæmia.

The famous case of Peter the Great, and many others, have been cited where the asthmatic manifestations gave place to gout. The asthma became relieved as the blood was freed of uric acid. Gout developed because the uric acid was precipitated from the blood into the tissues.

The protean manifestations of arthritism can be understood if we regard the entire vascular system as one organ, upon which the perfect nutrition of every other tissue in the body is dependent.

If the blood when most alkaline becomes loaded with uric acid, the size and relative nutritional capacity of this vascular organ is greatly diminished. Thus the nutrition of every structure in the body may be modified.

However, some tissue, either by inheritance or acquisition, is weaker than the rest, and first makes manifest the deranged nutrition. Molecular starvation causes loss of function of the cells in all diseases of uric-acidæmia.

The other class of arthritic disorders occur when, from lessened alkalinity of the blood, uric acid is precipitated into any of the numerous adjacent tissues.

Heredity, anatomical and physical causes especially determine the site of this precipitation. This second class of diseases are characterized by the manifestations of an actual irritant instead of being merely functional disturbances, as in the first class.

Asthma belongs to the first class. Pulmonary weakness being the predisposing cause, any age may be afflicted; but the greater proportion of cases occur during adult life. Males are affected twice as often as females, and the disease is transmitted along the male line. Heredity can be traced in fifty per cent. of the cases. Arthritism in some form, perhaps, could be traced in every instance.

Attacks come on most frequently at the beginning of the alkaline tide, which is from two to four o'clock in the morning, when the blood is surcharged with uric acid.

Bronchitis is present in eighty per cent. of the cases; intestinal indigestion, characterized by flatus, and skin diseases also occur.

The causes of asthma may be divided into two classes:

First.—The systemic or essential cause, the arthritic diathesis.

Second.—The local or exciting cause of the attack.

The first of these is, perhaps, present in every case. Loomis says: "Unquestionably, the primary cause of asthma is some constitutional idiosyncrasy."

Aneurisms of the aorta and other mediastinal tumors, in certain instances, have produced asthma. These tumors press constantly upon the pneumogastric nerve, yet the asthmatic paroxysms agree with the alkaline tide. Instances of this kind seem to emphasize the necessity of both dia-

thesis and neurosis. The pressure explains the neurosis, and the paroxysms occurring only during the alkaline tides show the arthritism.

The second class of causes—the local or exciting causes—can only act when the first exists. That is, the condition essential to the paroxysm, as turgescence, hyperæsthesia and spasmodic contractions of the muscles, can only occur when the nutritional disorder has resulted in a neurosis of the pulmonary plexus.

Among the exciting causes may be mentioned: irritating inhalations—dust, smoke, chemical vapors, fumes of sulphur, burning sealing-wax; vegetable irritants, odors of ipecacuanha, roses, hay, rag weed, and emanations from animals. Also emotional disturbances, sudden chilling, and climatic influences, all of which affect the relative alkalinity of the blood. Among the reflex causes may be mentioned an overloaded stomach or rectum, and uterine disturbances.

Chronic inflammations and diseases of the nasal mucous membrane, cardiac disease, and emphysema may likewise produce asthma. Too sudden arrest of chronic discharges, retrocedent gout, syphilis, skin diseases, and renal diseases are classed as excitants.

The relation of phthisis to asthma seems an unsettled question. Some regard pulmonary tuberculosis as "an antecedent disease having a causal relation to asthma." Others regard asthma as antagonistic to phthisis, and believe an arrest of the tubercular trouble occurs with the onset of asthma. The anatomical changes observable in asthma only occur when the disease has become chronic. They are products of inflammation incident to chronic bronchitis, and the emphysematous condition resulting from habitual overdistention of the air cells.

The asthmatic syndrome is a classical portrayal of uric-acidæmia. As observed in most uric acid disorders, a prodromal buoyance gives place to corresponding languor and depression of spirits.

Ingestion of any of the xanthin group clears the blood of uric acid and causes this exhilaration only to be followed by an increased uric-acidæmia when the alkaline tide begins.

Sleeplessness, pruritus, and headache are marked.

At first there is voided large quantities of limpid urine, in which the uric acid is diminished. This soon gives place to scanty high-colored urine loaded with urates. The paroxysm comes on usually during the alkaline tide, in the small hours of the morning; after a meal that raises alkalinity, or during the afternoon alkaline tide—from three to six o'clock. The capillaries are obstructed, the veins distended, the surface temperature below normal, and the extremities cold, blue and shrunken.

The pulse is "small and thready." The sufferer rushes to the window for oxygen, regardless of the outside temperature. The high arterial tension thus manifested explains the frequent presence of bronchitis, acid dyspepsia, renal and skin diseases.

The physical signs, together with the history, make it impossible to confuse asthma with any other disease.

The attacks may last from a few hours to several days, and have a great tendency to become chronic.

Emphysema and dilatation of the right heart usually are found in those having suffered for years.

Modern treatment has not only been able to cut short the attacks in most instances, but to prevent a return, as well.

A cure, in the sense of immunity, as results when cured of certain microbic diseases, of course never occurs in a disorder of nutrition. The same nutritional disturbance, which primarily existed, will cause a return of the disease.

Since arthritism is the essential cause of asthma, prophylactic treatment should be begun in the children of all lithemic individuals, especially the sons of asthmatics.

Prophylactic treatment embraces proper hygiene and diet. The environment should be changed where several generations have been reared upon the same soil under identical conditions.

Oxidation should be promoted by an out-of-door life, mountain-climbing, sea voyages, bathing, massage, or other means. Warm, dry climates are to be preferred, and flannel should be continuously worn.

The diet should be as nutritious as possible, and free of the uric acid group. No tea, coffee, chocolate, alcohol, red meats, bananas, strawberries or tomatoes should be used.

The lentils and articles of diet containing salicylates and phosphates (in other than nucleic form) are serviceable.

Since a deficiency of oxygenation is the cause of the products of incomplete metabolism, that class of food that carries with it most oxygen, the carbohydrates, should constitute the greater part of the diet.

As expressed by Stewart: "With a diet containing less proteid and fat and more carbohydrate the oxygen deficit would be less."

The medicinal treatment embraces the management of the attack and the limitation of the diathesis. For the control of the attack the exciting cause must be removed and the uric-acidæmia must be overcome. The exciting cause should be ascertained, and if it be irritating inhalation, reflex or mechanical, atmospheric or emotional, auto-intoxicant or extraneous cause, it should, if possible, be removed.

Freeing the blood of uric acid re-establishes the circulation, opens the obstructed capillaries, empties the engorged veins, overcomes the cyanosis, and permits relaxation.

The therapeutic measures overcoming uric-acidæmia are the hypodermic injection of morphine and atropine sulphates, hydrochlorate of apiomorphine, bisulphate of quinine and acid salts of similar alkaloids. Oxygen and the nitrites may be used by inhalation.

The nitrites both free the blood of uric acid and dilate the capillaries.

The drugs most popular for internal administration—the iodides, the acid phosphates, the coal-tar derivatives and such depressants as lobelia and

tobacco—have also been shown by Haig to raise the acidity of the blood.

The diathetic or curative treatment (to be administered during the interval) consists in removing the uric acid from the system and in permanently keeping down arterial tension by a diet free of the xanthin group.

The medicaments eliminating uric acid from the system are the salts of lithia, the salicylates, piperazine, and other uric acid solvents. Acid salts of arsenic and quinine are supposed to lessen its production in the system.

The suprarenal extract is indicated for its tonic action on the cardiovascular apparatus, aside from any action it may have upon retrograde metamorphosis.

Cholagogues and laxatives to unload the liver and intestines are both necessary during the attack and the interval.

Holding in view the principles laid down by the school regarding asthma as a diathetic neurosis, together with the treatment elucidated by Alexander Haig, has undoubtedly been the most satisfactory in my hands.

ABOUT DWARFS.

BY LAWRENCE IRWELL, M. A., B. C. L., of Buffalo, New York.

IT HAS long been a matter for discussion whether there ever existed any nations who may absolutely be classed as dwarfs. In many ancient writings are mentioned various races of pygmies as inhabiting the cold northern climes of Scythia, or the tropical deserts of Libya and Asia Minor. Aristotle vouches for the reliability of those witnesses who professed to have seen dwarf men and dwarf horses upon the banks of the Nile; and Pliny gives details of their habits. Herodotus speaks of a race of little men of inky-black color who inhabited a large city on a river which flowed from West to East Libya, and swarmed with horrible crocodiles. Ctesias, a contemporary of Xenophon, says that he saw in Central India a race of pygmies only two feet in stature; they inhabited a province in which the animals were proportionately small, the sheep being no larger than new-born lambs, and the horses, cattle and asses no larger than a ram. Ptolemy—Claudius Ptolemæus, the celebrated geographer and astronomer—mentions a "little people" called the Pechinians; he describes them as inhabitants of a large portion of the eastern frontiers of Ethiopia. In later times, an English sailor named Battel, who was taken prisoner by the Portuguese about 1590, and carried into Africa, relates in his adventures that he met with a nation of dwarfs called the "Matimbos." A Dutch traveler, Oliver Dapper, describes a little nation of elephant hunters named the "Mimos," whom he discovered in 1685, inhabiting a district near the Congo river.

Mr. Du Chaillu, writing in 1860, speaks of a strange people, of wild habits, whom he found inhabiting a large tract of land in the country of Ashango; they were called "Ovongos" by their neighbors, the Ashangos, with whom they did not marry. The Ovongos were of hideous aspect, their faces being yellow in color. They were about four feet five inches in height.

People much under the average stature have been found in small numbers in Southern India and in Madagascar, and they are spread widely over the southern half of Africa, where they have been studied in recent years. Their origin is unknown, but they seem to pertain to the Negroid families. Their existence has been periodically reported since the dawn of history, but when the world repudiated the statements of some of the earliest geographers, it rejected the pygmy tribes of whom the ancients wrote, and they were not rediscovered until the second half of this century. The African dwarfs have been distributed into four great groups, viz.: those who inhabit West Africa, and who live chiefly in the forests. An adult male is usually between four feet three inches and four feet seven inches in height. The second group is found in the central regions of Africa, and the individuals composing it are sometimes as tall as four feet eight inches. They are skillful hunters, and are nomadic in their habits. The third group lives east of the Nile; I have been unable to discover anything concerning the mode of life of its members; perhaps no traveler has yet visited them. The Bushmen, who live in the Kalahari desert, and who range between four feet and four feet five inches, constitute the fourth group. Our knowledge of all of these pygmies is very scanty, but there is no doubt that they really exist.

Dwarfs play a large part in the mythology of the ancient Germanic nations. They were supposed to have their own kings, and to dwell in the interior of the earth, wherein were priceless treasures. It was they who provided the armor for the gods, and they also gave Odin his spear and Thor his hammer. Some of the virtues of the dwarfs are supposed to have been derived from an actual race of small stature—the Lapps, who are said to have occupied part of the Scandinavian peninsula before the immigration of the Gothic peoples. British tradition tells of a "Tom Thumb" at King Arthur's court; and Gulliver's Lilliputians are among the best known of the historic dwarfs.

Prior to the eighteenth century, dwarfs were very frequently retained as court favorites. Of ancient dwarfs, Philetas, of Cos, tutor of Ptolemy Philadelphus, who was born about 330 B. C., was said to have worn weights in his pockets to prevent him from being blown away. Queen Henrietta Maria, of France (wife of Charles the First of England), had two dwarfs whose united height is given at seven feet two inches. Geoffrey Hudson, mentioned in *The Peveril of the Peak*, was three feet nine inches tall. Nicholas Ferry, known as Bébé, the dwarf of King Stanislaus, of Poland, was only twenty-three inches in height. He died at the age of ninety, in

Paris in 1858. Borowlaski, who lived from 1739 to 1837, was a Polish nobleman whose height at the age of thirty was thirty-nine inches.

Dwarfs may be divided into two classes—first, those who are born so, and remain so all their lives; and secondly those who became dwarfs from accident in the early months or years of childhood. It is an undoubted fact that the dwarfs who come under the first head are often noticeable for their shrewdness and intellectual capacity, combined with much childish vanity, and an overwhelming love of dress and admiration. They are, taken as a whole, active as regards both body and mind, and they are good-tempered. Upon the other hand, those who are deformed and show an unusual development of any special limb are generally dull and weak mentally. Nicholas Ferry, whom I have already mentioned, was remarkable for his wit, good temper and intellectual attainments. Next after him in celebrity comes a female dwarf, Babet Schreier, who was born in Germany in 1810. Her parents were laboring people of ordinary stature who permitted visitors to see their wonderful child, but who would never consent, although they were poor, to exhibit her for any pecuniary benefit. Babet weighed at birth only a pound and a half, but she was perfectly formed. She grew until she was about two and a half feet high, when she stopped. Her health was always good, and she was amiable and lively.

It is a strange fact that the length of life of dwarfs seems to be in proportion to their size; they arrive at maturity quicker than a normal human being and they age quicker. We read of this in the case of the famous English dwarf, Hopkins, who lived until about 1750. At fifteen years old he measured two feet seven inches, and weighed only thirty pounds. Up to this age he had the appearance of a fresh, smooth-skinned youth; but suddenly an extraordinary condition, resembling decrepid old age, began to creep upon him. He became bent and suffered severely from asthma. At the same time his sight and hearing began to fail and his teeth commenced to drop out. Then he became so weak that he could not walk without a stick, and he is said to have presented all the appearance of a withered and aged old man. Before these signs of decay came upon him his weight had been nineteen pounds, but within six months he lost six pounds, and within two and a half years he died of what appeared to be premature old age. His parents were healthy people, and there had been no previous member of his family who was abnormal. At the time of his death his age was seventeen years and a few months.

Although dwarfs generally attain a greater age than giants—the latter seldom live to see their forty-fifth birthday—they do not often pass seventy. There are on record two notable exceptions to this rule, but the accuracy of the records must, I think, be open to doubt. Amias Clowes died in England, in 1784, at the age, we are told, of a hundred and three years. His height is given as three and a half feet. He lived in a little house eight feet square, furnished in a way to suit his size. It is necessary to

assume either that he lived alone or that the other occupants of the residence were dwarfs.

The only other aged dwarf of whom an account is obtainable was Peter the Great's favorite, a woman named Ponpée, whose height was that of a child of six. She was lively and clever, and the emperor seems to have had an extraordinary affection for her. She is said to have lived to the age of a hundred without ever having suffered from any illness!

There may still be seen in the ducal palace at Matua (North Italy) six little rooms which were constructed by order of one of the dukes of Matua for the special occupation of his favorite dwarfs. The walls of these apartments are only six feet high, and the floors eight feet square. The rooms no longer contain any furniture, and even the doors have been taken off their hinges.

In recent times no dwarf has created more sensation than Charles S. Stratton, commonly known as "General Tom Thumb." He was about thirty-one inches in height, and he married Livinia Warren, who was an inch taller. They had one child, a girl, who died when about three years old. I have not succeeded in ascertaining what her size was. "Tom Thumb" lived till his forty-fifth birthday, his death having taken place in 1883. "General" and Mrs. White—their real name was Flynn—succeeded to some of the admiration bestowed upon the "Thumbs." Their imitations of popular actors and singers were thoroughly appreciated by the amusement-loving public.

Jockeys are frequently what I may call "artificial" dwarfs, measures being taken to keep down the weight and retard the growth of boys intended for this occupation.

Fluid extract of jaborandi acts well as a diaphoretic. Full doses should be given every hour combined with a little digitalis.

In the treatment of epilepsy by bromides, the results will be more favorable when the patient is deprived of as much salt as can be dispensed with without injury to the general health. This may best be accomplished by the use of a milk diet.

Puerperal convulsions occurring during labor are best treated by the use of chloroform. At other times when there is complete suppression of urine, with severe convulsions and intervening comatose state, measures should be taken to produce diaphoresis and elimination. In nearly all ordinary cases, morphine is our most valuable remedy, and should be freely given.

A FEW CASES OF SECRETORY NEUROSIS OF THE STOMACH.¹

A CASE OF HYPERCHLORHYDRIA, DEMONSTRATING THE USE OF THE INTRAGASTRIC ELECTRODE; AND A CASE OF GASTROPTOSIS, DEMONSTRATING THE GASTRODIAPHANE AND AN ORIGINAL METHOD OF USING CO₂ IN STOMACH DISEASES.

BY M. D. SCHMALHORST, M. D., of St. Louis, Missouri.

CASE 1.—The first case I wish to present is one of typical hyperchlorhydria. J. W. M., male, thirty-four years of age. Has had stomach trouble five years; was intermittent at first, troubled for a few days or a few weeks, then there would be weeks and months when he was free from any ailment. During the last year or more there has been almost constant digestive troubles, constipation, pyrosis, a dryness in the throat, with a tendency to swallow the dryness down. Appetite is very good; has not lost in weight. During the last six months has had pains in the gastric region constantly after eating. Pain is at the pit of the stomach, and comes about an hour and a half or two hours after eating, and lasts from one to two hours. Nearly always feels good just before and after eating.

EXAMINATION.—Stomach not painful to pressure, and not enlarged when distended with CO₂. Tongue clean, except a slight coating far back. General appearance of patient is pale, and skin is relaxed and flabby. Test breakfast yielded 34 c.c. of a homogeneous mass of bread and water, and when filtered there was 28 c.c. of filtrate; no mucus. This gave total acidity 92; free HCl, 78. Some dextrine and much erythrodextrine.

It was easy enough to diagnose this case without a chemical examination of the gastric contents. It might be of interest to state that the patient had been repeatedly treated for gastric catarrh, but when the test meal was taken off the presence of no mucus was sufficient evidence that the wrong diagnosis had been made. The treatment was simple in this case, and the patient rallied from the beginning. Nux vomica and bicarbonate of soda were given; the nux vomica in capsules, six drops fluid extract, before eating, and ten-grain doses of soda six times a day, one dose forty-five and another ninety minutes after eating. The direct application of the faradic current to the inside of the stomach was practiced every day for a week; then every other day for two weeks; every third, fourth, fifth and sixth day for three months, when all symptoms of dyspeptic trouble had disappeared. I lessened the dose of the alkaline gradually, but kept the nux vomica up the whole period. At the end of the three months the acidity had been reduced to 56.

¹Read before the St. Louis Medical Society, December 15, 1900.

Perhaps the most essential part in the treatment of hyperacidity is the proper diet. Carbohydrates will not digest in an acid medium, neither will they combine to neutralize but the smallest portion of HCl. On the other hand, all sorts of proteids are digested exceedingly well in an acid medium, and combine with a considerable part of the hydrochloric acid. In consequence of these facts the diet in such cases where too much acid is secreted consists of albumen, such as eggs and other proteids, as is found in meats of all kinds, especially game, fowl and fish. A small portion of wheat bread is quite essential, and usually butter is borne very well.

CASE 2.—The second case represents an atypical hyperchlorhydria, and a diagnosis should hardly be made without a chemical examination of the gastric contents. Miss F. R., twenty-eight years of age. Since childhood had been subject to headaches. Could always belch up food, especially if fats had been eaten. Never had any severe illness until four years ago. At this time the whole system began to relax. No desire to do anything. Tired and wanted to rest all the time. Nothing especially wrong, but was wrong all over. This sort of indifference lasted about six months, when she began to feel as if the stomach was the seat of all the trouble. At this time she began to lose in weight, going from 117 to 93 pounds. No pain anywhere; becoming more nervous; appetite failing, and after a little while was afraid to eat because everything soured on her stomach. A burning pain appeared at pit of stomach when these sour spells came. Often when a fair meal was eaten, the sour stomach with the pain did not come until toward supper time, and then she was completely undone. No medicine seemed to give relief, except lime-water or a soda powder, but was told these would do more harm than good in the long run. Could regurgitate at will; this gave relief, but found that it was making her weak, so it was stopped. During the latter part of the severer symptoms she lived on cornbread and pop-corn. The cornbread was baked in small cakes with salt and water. Small morsels of this were taken and masticated for a long time until it fairly disappeared in the mouth, and the remaining harder part was not swallowed; likewise the pop-corn. Finally grew better, but has never regained her former self. Says essence of pepsin did more good than any other medicine; did not act while she took it, but the after-effects were good. Seemed to act as a tonic.

On August 26th patient presented herself at my office, feeling as if one of her bad spells was coming on. Examination of abdomen and chest negative. Skin is pale, and the general appearance is one that shows lack of nutrition; back of tongue coated. Stomach dilated with CO₂ and found normal in size and position. Test meal given, and after one hour taken off. Total amount of juice, 26 c.c., which filtered 19 c.c. Total acidity, 88; free acid, 70; a little dextrine and plenty of erythrodextrine. Carbohydrates were restricted and proteids advised. She was asked to eat

five times a day, making three principal meals with two lunches thrown in. This advice is frequently absolutely necessary in the treatment of a long-standing gastric trouble. Almost always the family physician has advised a very restricted diet, and as a matter of course more or less starvation has actually taken place.

The medical treatment of this case is very interesting. She had lost faith in medicine, and said she believed that if she was ever to be cured it would be by some means other than medicine. This pleased me, for I was more than glad to get an opportunity to use CO_2 exclusively. Lavage was used a few times, also the deglutable electrode, but after a couple of weeks these were discontinued and the gas used alone. The results have been all that could be desired.

CASE 3.—Another case of hyperchlorhydria. This is the gentleman upon whom you have just seen demonstrated the application of the faradic current directly to the inside of the stomach. Has had digestion trouble for sixteen years. Family history good. Has lived in several large cities, and has received medical treatment from many doctors. The one prominent symptom which has always been present is pain just below the zyphoid. This was very painful on pressure. Had lost weight. Never has good appetite. Present condition: patient is pale, skin loose and relaxed. Examination of abdominal and chest organs negative. Tongue coated. Splashing sound can be produced down within very close margin of umbilicus. Test breakfast given, and at the end of an hour withdrawn; 56 c.c. secured. Contents acid to congo paper. Free HCl reaction to Toepfer's solution. Total acidity, 86. Free HCl, 72. Ten c.c. milk at 100°F. , coagulated by ten drops of juice in one minute. Gastrodiaphane shows slight ptosis. Diagnosis: hyperchlorhydria and gastroptosis.

The drug treatment in this case has been very simple. Sodium bicarbonate has not been taken regularly, but occasionally to relieve distress after eating. Lavage was done only a few times. To ameliorate the symptoms in this case I have relied almost wholly on the deglutable electrode. The patient is here and has kindly permitted a demonstration of this method, and in speaking for himself he will tell you that he is feeling better.

CASE 4.—The following case represents a type of neurosis often found in stomach disorders in which the nervous symptoms are intensified. Dr. K. gave history of dyspeptic troubles off and on for a number of years. At times free from all ailment, but nervous spells came now and then, when the gastric region appeared to suffer most and apparently was the seat of all the trouble. There was a tendency towards constipation. This was especially marked just before and during an attack. These lasted from a few days to as many weeks, during which time appetite was gone, skin was bathed in perspiration continually, hands and feet cold, severe nausea, and occasional vomiting. During one of these spells I was called to see the patient and found him in his office, totally relaxed and as I have de-

scribed above. Physical examination negative. He called next day at my office with a test meal ready to be withdrawn. Was feeling miserable. None of the test meal could be secured. Said he generally vomited easily, so while abdomen was across a chair and the finger tickling the pharynx, we expected good results, but no test meal the first day. On the second day the effort was successful to the extent of 8 c.c. of a rather thick mixture of bread and water, very little mucus, which yielded 6 c.c. of filtrate. No acid at all, either free or combined. Achrodextrine present. The result of this examination was enough to frighten any patient, especially a doctor. This was especially so in this case, because four years ago during an attack of this kind the attending physician suspected a cancerous condition. I had nothing to fear, however, and assured him that it was impossible that there could be a malignant trouble in one who was so well nourished, or who had been previous to the last few days. Accordingly a third test meal was ordered, with surprising results. The next day 22 c.c. of filtrate was taken, which showed a good congo reaction, a decided Toepfer reaction for free acid; a total acidity of 44, free HCl, 30.

Here we have a juiceless stomach one day performing absolutely no function—a man dying with cancer sure, while the next day he can digest a good beef roast, and plenty of HCl and pepsin to last quite a half century longer. I have never cured a man so quickly before.

The return of normal function in this case was rapid, yet in these secretory neuroses the condition may change one way or the other in a few hours.

CASE 5.—ACHYLIA GASTRICA.—Gentleman, fifty-four years of age. Never troubled with dyspepsia until September, 1900. Says at this time for some unknown reason learned that he had a stomach, but that surely it had ceased to be a component part of his anatomy. No particular pain, but a general miserable feeling. Continual nausea. He thought he would feel better if he could vomit, but he could not. Complete loss of appetite. A homeopathic diagnosis was dyspepsia, and during three weeks of homeopathic treatment lost twenty-four pounds and kept losing ground on a diet of beef tea and milk. I was called to see the patient, and found a nervous, excitable sort of an individual, who was pretty sick, yet not so bad as he thought he was, because he, being a very intelligent man, could not think of anything but a cancer that could cause so much trouble in such a short time. A test meal was ordered and after an hour not a particle could be taken off. A second effort was a failure, but while the tube was in the stomach I introduced a pint of water and in siphoning it off found among the particles of bread two pellicles of membrane. A third effort at test meal resulted in catching within the tube at the right moment enough of the stomach contents to make a diagnosis of achylia gastrica, or juiceless stomach.

In the history of this case one point was omitted which possibly had something to do with the neurosis; the patient thought so. He had taken at the beginning of his trouble ten gr. of calomel with eight of blue mass.

Immediately following this all symptoms were aggravated. Yet I doubt if the mercury did produce any serious disturbance. Had it done so it would most likely have produced a gastritis. There was no evidence of this at all. No mucus was found in the wash-water. The patient was put upon a carbohydrate diet, nux vomica, and hydrochloric acid; and a more grateful man you never saw, since improvement began at once.

CASE 6.—ENTERITIS MEMBRANOSA.—Female, twenty-six years of age. Referred to me by Dr. M. This case is especially interesting, because the nervous condition of the stomach proved to be secondary, and I did not make a diagnosis until the patient was under observation for ten days. All this time was doing her no good, and I was afraid I would lose her. The history of her trouble began ten years ago, when she began to have dyspeptic attacks periodically without any regularity. Extreme nausea was present, which gradually disappeared. At very rare times was there vomiting. Obstinate constipation; medicine was always necessary to move the bowels. Finally relied upon enemas, but after awhile these failed. For the last year symptoms have been getting worse. Attacks of vomiting more frequent. More pronounced nervous prostration. Considerable tenesmus at stool. Present condition: skin pale, chest and abdominal organs intact. Stomach does not give pain on pressure, but there is a general diffuse soreness throughout the entire abdominal region on pressure. Pain is more pronounced on left side, following the descending colon. Test meal yielded 30 c.c. of juice, normal in quality. Total acidity, 58; free HCl 34. I ordered nux vomica, cascara and magnesia sulphate. This was kept up for ten days, together with direct intragastric electrizations, with little, if any, benefit. I concluded to change the salts and cascara prescription and, accordingly, had it added to an enema, administered high up twice a day. The results of this were good. The next day the report was that a long piece of something passed from her that looked like a veil. A sample of the rectal discharge was secured and examined. These long, round, "veil-like" pieces in the discharge proved to be mucous cylinders. This mucus was passed in large quantities at every stool. Says she often had to go to stool when nothing but a little mucus would pass, and at these times there was rather severe tenesmus.

From the history of the patient this condition had existed at least one year, but she had never had occasion to observe the rectal discharge and therefore did not know of the condition of her colon. The treatment was as follows: Faradic current, potassium chlorate, and flushing the bowels daily with two-quart enemas, with teaspoonful of silver nitrate, a drachm to the ounce. The treatment acted well. The patient is still under observation, and now, at the end of a month, she has gained strength, not so pale, has never vomited, and the amount of mucus has nearly disappeared from the dejections.

455 Century Building.



Obstetric Clinic. By DENSLOW LEWIS, Ph. C., M. D., Professor of Gynecology in the Chicago Polyclinic; President of the Attending Staff of Cook County Hospital, etc., etc. Octavo, 640 pages. Price, \$3.00. E. H. Colgrove, 65 Randolph street, Chicago. 1900.

A series of thirty-nine clinical lectures on practical obstetrics, delivered to students and practitioners in Cook County Hospital, Chicago; together with remarks on abortion, infanticide, illegitimacy, the restriction of venereal diseases, the regulation of prostitution, and other medico-sociologic topics.

The Treatment of Fractures. By W. L. ESTES, A. M., M. D., Director and Physician and Surgeon-in-Chief of St. Luke's Hospital, South Bethlehem, Pa. Cloth, \$1.00. Illustrated. International Journal of Surgery Co., 100 William street, New York.

A series of papers on the practical management of fractures. The best methods of treatment are set forth in a clear and concise manner, the subject being given a more comprehensive discussion than will be found in the text-books on general surgery.

Appendicitis and Its Surgical Treatment. By HERMAN MYNTER, M. D. (Copenhagen), Professor of Clinical Surgery in University of Buffalo, New York. Third Revised Edition. Cloth, \$1.00. J. B. Lippincott Co., Philadelphia.

A comprehensive and scientific discussion of a most important subject. One hundred and eighty-five operated cases reported. Dr. Mynter is one of the foremost authorities on appendicitis in America, and this edition of his monograph will be received with renewed appreciation.

A Text-Book of the Practice of Medicine. By JAMES M. ANDERS, M. D., Ph. D., LL. D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College, Philadelphia; Attending Physician to the Medico-Chirurgical and Samaritan Hospitals, Philadelphia, etc. Illustrated. Fourth Edition, Thoroughly Revised. Cloth, \$5.50, net. 1900. Philadelphia: W. B. Saunders & Co., 925 Walnut street. Lewis S. Matthews & Co., 714 Pine street, St. Louis, Agents.

This standard work is well known to the medical profession, and this new edition will meet with general approval as a matter of course. Con-

siderable new matter has been added, the section on Diseases of the Digestive System being especially improved.

Sexual Debility in Man. By FREDERIC R. STURGIS, M. D., formerly Clinical Professor of Venereal Diseases, Medical Department University of the City of New York; Ex-visiting Surgeon to the City Hospital, Blackwell's Island; Author of "A Manual of Venereal Diseases;" one of the Authors of "A System of Legal Medicine," etc., etc. Cloth, 450 pages. Price, \$3.00. 1900. New York: E. B. Treat & Co., Publishers.

Physicians desiring information on this subject will find it exhaustively treated in this work. The author evidences a practical knowledge of his subject, and a thorough acquaintance with the literature bearing upon this branch of genito-urinary surgery.

Pathology and Morbid Anatomy. By T. HENRY GREEN, M. D., F. R. C. P., Physician and Special Lecturer on Clinical Medicine at Charing Cross Hospital, etc. New (9th) American from Ninth English Edition. Revised and Enlarged by H. Montague Murray, M. D., F. R. C. P., Lecturer on Pathology and Morbid Anatomy at Charing Cross Hospital; Revised for America by Walton Martin, Ph. B., M. D., of the College of Physicians and Surgeons, New York City. Handsome Octavo Volume of 578 pages, with 4 Colored Plates and 339 Engravings. Cloth, \$3.25, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

About one-half of the matter of this work has been rewritten, bringing it up to the present advanced knowledge of the subjects. To make the work especially valuable to American readers, it has chapters on Malaria and on the Blood, by Dr. Walton Martin, of the College of Physicians and Surgeons, New York.

The Students' Medical Dictionary, including all the Words and Phrases Generally Used in Medicine, with their Proper Pronunciation and Definition. Based on Recent Medical Literature. By GEORGE M. GOULD, A. M., M. D. Eleventh Edition, Enlarged, with many Illustrations. Price, \$2.50. Philadelphia, Pennsylvania: P. Blakiston's Son & Co., 1012 Walnut street. 1900.

This work has been used so generally during the past years and the profession is so familiar with it as to make comment unnecessary. Suffice to state that the eleventh edition is enlarged, improved and in every way superior to its predecessors.

Students' Edition, A Practical Treatise of Materia Medica and Therapeutics, with special reference to the Clinical Application of Drugs. By JOHN V. SHOEMAKER, M. D., LL.D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College, of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of

the American Medical Association, of the Pennsylvania and Minnesota State Medical Societies, the American Academy of Medicine, the British Medical Association; Fellow of the Medical Society of London, etc., etc. Fifth Edition, Thoroughly Revised. $6\frac{1}{4} \times 9\frac{1}{2}$ inches. Pages vii-770. Extra Cloth, \$4.00, net; Sheep, \$4.75, net. F. A. Davis Company, Publishers, 1914-16 Cherry street, Philadelphia.

This standard work has passed through five editions, which furnishes indisputable evidence of its popularity. The present edition is improved and brought thoroughly up to date in all departments. We especially commend this book to the student and practitioner.

Clinical Examination of the Urine and Urinary Diagnosis. A Clinical Guide for Use of Practitioners and Students of Medicine and Surgery. By J. BERGAN OGDEN, M. D., of Harvard University Medical School, etc., etc. Illustrated. 1900. Price, \$3.00, net. W. B. Saunders & Co., Philadelphia and London. Lewis S. Matthews & Co., 714 Pine street, St. Louis, Agents.

The author has successfully endeavored to write a treatise, taking up in detail the subject of urinary diagnosis and the methods of applying the information gleaned from microscopical and chemical examination of the urine. The volume is unique in that it aids the physician *to apply* practically the information gained and it will be found a most valuable aid in the diagnosis and treatment of urinary diseases.

Notes on the Eye. For the Use of Undergraduate Students. By FRANK LANAMORE HENDERSON, M. D., Professor of Ophthalmology, Barnes Medical College, St. Louis, Mo. Second Edition. Published by the Author.

For the intended purpose, this is the best book of its kind we have seen. To quote from the author's preface, it is original because [of its omissions. The technical ophthalmology of the specialist is not given a place in this work, but it is filled with selected *useful* knowledge such as the student can master in the time allotted to this subject in the medical schools. The work is well printed and freely illustrated, and should have a wide sale among undergraduates.

MEDICAL TREATMENT.

La Grippe.—Influenza is a disease that varies greatly in its effects on different individuals, and which produces so many symptoms in so many different organs of the body that it is indeed difficult to formulate any special lines of treatment, and, as Yeo states, when a practitioner advertises that he has given potassium bicarbonate in five hundred cases without a death, and another that he has given salicin in one thousand cases without a death, they make statements that are worse than useless, because they are misleading. He, however, places quinin as the most deserving drug in the treatment of influenza, giving it in combination with potassium citrate and ammonia in effervescence, and in small or moderate—not large—doses, frequently repeated. Mosse, in the *Lancet*, has shown that the bacillus of influenza is unable to live in an organism in which quinin circulates.

Below are given other prescriptions as suggestions in treatment of the different complications which may arise.

℞ Hydrargyri chloridi mitis..... gr. iss
Ft. pulveres No. vj. Sig.—One powder every hour until there is a good bowel movement.

H. C. Wood, in *Philadelphia Medical Journal*, advises the following in la grippe:

℞ Antipyridi gr. xv
Pilocarpinæ hydrochloratis..... gr. ss
Tinct. aconiti..... m iij
Aquæ destil..... ʒ iss

M. Sig.—One tablespoonful, immediately followed by a hot general bath, or a foot-bath for ten minutes, then the patient being covered in bed, one dessertspoonful in a glass of hot toddy, repeated, if no sweating occurs, in twenty minutes. When there is pain, if morphin does not disagree with the patient, one-sixth of a grain may be added to the mixture.

J. A. M. A.

Suggestions for the Practical Treatment of Typhoid Fever.—(Dr. W. Ewart.)—The chief objects of treatment of typhoid fever should be to limit the extension of ulceration, to treat the ulcers, and to obviate their giving rise to hemorrhage and perforation. Stagnation of putrid feces is one of the chief dangers, and many cases of alarming tympanites are due to this factor. The lesser evil of constipation, incidental to astringent treatment, is easily overcome by injections. Relative inactivity of the liver is the inevitable consequence of the hyperæmia, the immobility of the patient, and the exclusive milk diet. Much of the benefit of the cold bath treatment is due to the relief of this condition. Mercury is of a high value here as a hepatic stimulant and intestinal antiseptic. The patient should be kept in bed at a slight inclination to the left side, in order to remove weight from the cæcum. As medicinal treatment, twenty minims of tinct-

ure hydrargyri perchloridi and fifteen minims of tincture ferri perchloridi are given to an adult every six hours. Diarrhea is quickly relieved and constipation counteracted by glycerin enemas. The diet should be peptonized milk.

The Cure of Insomnia.—Sawyer says: "Never allow a patient to dose himself with hypnotics." Always keep in mind the cause of insomnia and treat accordingly. Acute insomnia, due to nervous shock, excitement, or worry, will respond nicely to a hypnotic. In such cases, a combination of drugs should be administered in preference to a single one. An over-worked man should guard against the use of hypnotics and rather rely on hygiene for a cure. A change of air and scenery, a change of diet in combination with healthy exercise, will accomplish the cure speedily. If the insomnia is chronic, large doses of kali bromidi, thirty to sixty grains, given before retiring, act favorably. Alcohol is of greatest value in chronic psychic insomnia, and should be withdrawn as soon as the results are obtained. Lying in bed in the morning is injurious, and should be avoided; on the other hand, an afternoon nap after meals is beneficial. As open-air exercise, horseback riding is recommended as the very best.

The Treatment of Influenza in Children.—There is no infectious disease that creates a greater disposition to tuberculosis than influenza. Only rarely can contact with the disease be avoided. All excreta should be disinfected; the excretion of the mouth and nose should be caught in rags and burned. Isolation should be recommended, and a disinfectant mouth-wash prescribed. Drinking-water should be acidulated, and irrigation of the nose practiced. As to treatment, there is no specific. A rational, hygienic, symptomatic and sustaining treatment only can be considered. A purgative dose of calomel is given in the beginning to clear the bowel, the *locus minoris resistentiæ* in children for microbic and toxic ingesta. The diet should be scanty and fluid in the beginning. Alcohol is required rather in convalescence than in the course of the disease. Cold baths are contra-indicated for the fever; on the other hand, hot baths are beneficial where there is much muscular pain and restlessness. Quinine is of benefit. Mosse gives thirty to thirty-five grains the first day, and sometimes also the second, to abort the disease. Severe vomiting should be treated by abstinence from food or by rectal feeding. The best relief is given by morphine, rarely by ice. A tablet of one milligramme or one drop of Magendie's solution should be thrown in the mouth and absorbed. Acetanilid is poisonous. Antipyrin and phenacetin are of use. One of the best stimulants is musk. A child of two years should take of the ten per cent. tincture five to ten drops every half hour until six doses are taken. Goldsmith claims that of one hundred and twelve persons who had been vaccinated and subsequently exposed to influenza, all remained free from infection.

SURGICAL SUGGESTIONS.

Catgut for Sutures.—With the many new processes or sterilizing catgut, it has again come to the front as a deep suturing material. Of course, its easy absorption makes it the most desirable material for that purpose; and that it has not found general favor is due to the late infections following its use. These infections are accounted for by the fact of only being able to sterilize the outside of the gut, while as soon as absorption takes place bacteria inclosed in the deeper layers become virulent. With our various new methods of asepticing the gut and its further antiseptic treatment, infectious agents must be looked upon as of an extraneous source rather than directly due to the catgut.

Dr. Elsberg gives a remarkable sample, and as it seems an efficient method for preparing cutgut, it is here appended. The fat is removed by immersion for forty-eight hours in a solution of one part chloroform and two parts ether. After this has been allowed to evaporate from the gut it is tightly wound in short strands upon glass slides and immersed for thirty minutes in a saturated solution of ammonium sulphate in water. Then it is washed in sterile water or in a weak solution of bichloride or carbolic, and preserved in alcohol. Catgut prepared in this manner has been found remarkably strong and pliable, and is quickly absorbed from the tissues. If desired to chromicize the gut, it is only necessary to substitute a one to one thousand solution of chromic acid in water for the plain water used in making the saturated solution of ammonium sulphate.

Alcohol Soap for Sterilizing Instruments.—

℞ Olive oil.....	6 parts
Caustic potash.....	7 parts
Alcohol.....	30 parts
Water	17 parts

The caustic action of potash is counteracted by the olive oil and water. The instruments are thoroughly washed with this soap or only wrapped in cotton saturated with the solution.

DR. KARL GESSON.

Needles are best kept in a saturated solution of soda albolene or absolute alcohol containing calcium chloride. Lysol is very good but hurts the needles by its color.

Drainage tubes are surgical abominations, and the necessity for their use should be avoided whenever possible. The thorough control of hemorrhage, together with strict asepsis and cleansing of the womb, will reduce the number of cases in which drainage tubes are indicated.

Amputation of the cervix in cancer of the uterus is seldom justifiable. It is half-way surgery, and is rarely of any use.

NEW REMEDIES.

Salo-Sedatus.—Salo-sedatus has been used by the profession for more than twenty-five years, and many reports as to its value have been made. It is antipyretic, diuretic, anodyne and hypnotic. It is also an intestinal antiseptic, and has been used advantageously for external application in ointments for eczema and other skin diseases. It is an excellent remedy to combine with quinine where the latter is indicated, as it is said to obviate many of the untoward effects which quinine causes in many patients. Salo-sedatus is manufactured by the Salo-Sedatus Co., St. Louis, who will send sample to any of our readers.

Thermol.—Thermol, $C_{14}H_{16}NO_3$, a synthetic alkaloid, is being favorably reported on by many prominent physicians. It seems to be especially valuable in typhoid fever.

Dr. Geo. B. Miller states in the *Philadelphia Medical Journal* that he finds thermol effectually controls the temperature of typhoid and helps eradicate the specific cause at work in the system, lessening the exhaustion associated with the high fever.

Dr. Edwin Rosenthal, ex-chairman of the section children diseases of the American Medical Association, discussing the therapy of thermol in febrile conditions, employs rather large doses in the treatment of whooping-cough. Having much experience in the use of other coal-tar derivatives in this affection, he employs the thermol in the same way—one-grain doses to a child of a year every two or three hours during the day. If the attacks are frequent—twenty or more a day—he adds the bromide of ammonium or potassium. As thermol is best given in powder or pill form, some difficulty is overcome when giving it in solution by having the apothecary mix the thermol with gum arabic and sugar, as for an emulsion, the vehicle being cinnamon water.

Several local physicians give equally good reports on this remedy. Two typhoid fever patients were carried through the disease in an uneventful and satisfactory manner, thermol controlling the temperature without, apparently, the same exhaustion as from other methods of treatment. Thermol also seems to exert antiseptic properties upon the intestinal tract.

Coughs: Their Suppression and Cure.—(By Dr. Louis De Lorme, of New York City.)—The treatment of coughs in general has always been varied and unsatisfactory. In the science of medicine there has even been the difficulty to find a good remedy to relieve pain and distress in many phases of chest troubles, and particularly in coughs of bronchitis, pneumonia and phthisis.

With all of the numerous remedies of the *materia medica*, though each has had some particular value, there has always been the disadvantage of some other and unpleasant therapeutic effect following their use.

Stomach disturbances, constipation, stagnation of the secretions, increased temperature, diminished expectoration, excessive narcotic effect, the danger of habituation, etc., etc., are some of the complications experi-

enced, and more especially are these conditions to be expected after the administration of codeine or morphine.

Furthermore, even admitting the value of codeine or morphine (with their undesirable after-effects) in certain cases, how often do they utterly fail to mitigate the coughs of phthisis, bronchitis and whooping-cough, and also prove their absolute uselessness in laryngitis, asthma, etc.?

How especially important is it to have an efficient remedy for the cough of phthisis pulmonalis, which would not cause the disagreeable stagnation of secretory products of the lungs, that would not weaken the respiratory apparatus nor have any deleterious effect on the heart.

Surely the profession has long felt the need of something to replace the various opiates for the suppression and cure of coughs, something that should be superior, more reliable and safer. A remedy that would not only be efficient, but safe for the treatment of the sympathetic cough of pregnancy. A remedy that can be used where heart complications occur. A remedy that will promptly check incessant, hacking cough, and paroxysmal coughs, which rob the patients of rest and sleep.

Doubtless a remedy proving unusually meritorious in treating these various forms of coughs, and one which would be free from the unpleasant characteristics of morphine and codeine, will be of much interest to my colleagues and of much importance to the profession of medicine. With this fact in view I have concluded to submit the notes of a few cases to show the exceptional good results obtained with a product recently introduced to the physician for his consideration.

I, like most physicians, look with the greatest skepticism on the ever-appearing articles on new remedies, and would not now have the opportunity to express my present satisfaction, if I had not been repeatedly urged by some of my confreres to try this new preparation in a few cases that were then giving me the greatest trouble.

The complete clinical reports of Prof. Morris Manges, of the Mt. Sinai Hospital of New York, Dr. W. Freudenthal, of New York, Dr. B. Turnauer (*Wiener Medizinische Presse*, No. 12, 1899), Dr. A. E. Beketoff (*Klinische Therapeutische Wochenschrift*, No. 14, 1899), following their investigation with heroin, I find to coincide with the results I have experienced with glyco-heroin, but I would here impress upon those interested that my entire investigations were made with glyco-heroin (Smith) only, excepting the few instances where I tried tablet triturates, and found them decidedly unsatisfactory.

Without doubt the merit of this preparation is to be attributed to its excellent composition, viz., heroin one-sixteenth grain, ammon. hypophosphite three grains, fluid extract of hyoscyamus one grain, fluid extract of white pine bark three and one-half grains, balsam tolu one-quarter grain, and glycerine sufficient to make one dram, wherein the therapeutic properties, if the drugs are properly compounded, and which is evidenced in this preparation, will be acknowledged desirable by every physician. Here I would point out the special advantage that this preparation possesses over heroin in any other form, viz., the unnecessary administration of other remedies while your patient is being treated with glyco-heroin, wherein you not only get the palliative effect of heroin, but have an admirable combination of remedies to bring about absolute cure in most cases. On account of the absence of syrup, instead of which glycerine

with its solvent and medicinal qualities is used, there is not experienced the usual derangement of the stomach following the administration of preparations containing sugar or syrup.

The addition of ammonia hypophosphite also appealed to me, for its superiority as an expectorant over other like remedies is an established fact and must add much to its therapeutic value.

From the white pine bark contained therein, the astringency of which is no doubt modified through the soothing effect of glycerine, I found a very beneficial effect on the mucous membranes, thereby proving this also a valuable and desirable addition.

If, with our knowledge of the superiority of heroin as a sedative, we closely scrutinize the formula of this preparation, we should not fail to observe the efficiency of this combination, the therapeutic value of which has been proved by careful physiological experiments in the laboratory with accurate observation on its therapeutic action before being introduced to the profession, whose demands upon a new remedy before permitting its admission to a permanent place in the *materia medica* are at the present time much more exacting than in the days of empirical pharmacy.

Believing that the individual results observed in a vast number of cases following the clinical investigation of a remedy to be superfluous, I shall here give the records in only a few of the cases in which I have tested glyco-heroin, and which are as follows:

1.—George N.; a case of pulmonary tuberculosis. The patient, who had been unable to sleep except in a sitting position, suffered from a violent cough with a great deal of expectoration and dyspnea. Respiration, 32; temperature in the afternoon, 103°; pulse, 120. The paroxysms of coughing were very violent, one following another in rapid succession. He had been given codeine and morphine, but the cough and other symptoms persisted. Finally he was given a teaspoonful of glyco-heroin (containing one-sixteenth grain of heroin) every three hours. That night he was able to lie down and sleep, only coughing twice during the night. After taking a teaspoonful every three or four hours for one week, his respirations were reduced to 26, temperature 101½° in afternoon, pulse 98. He said he had not coughed more than a dozen times during the entire week, his night-sweats had been very much diminished, appetite improved.

2.—Mrs. S.; has been confined to her bed with a severe case of la grippe for two weeks. On recovery she suffered with a persisting and harassing cough. Various narcotics and expectorants were administered, but afforded no relief. One teaspoonful of glyco-heroin was given every two hours. She obtained relief after taking the first dose. The next day she took one teaspoonful three times a day. At the end of the fourth day the cough had left her. The only unpleasant effect was she complained of being drowsy the first day.

3.—Joseph S., sixty years old. Had suffered since 1895 from chronic bronchitis. Had a violent cough, could not sleep nights. There was no emphysema in this case. He was placed on the following treatment: Potassium iodide, five grains three times daily, and glyco-heroin, one teaspoonful every three hours, the first week. After that the glyco-heroin only was given three times a day. This case ended in complete recovery.

4.—A case of whooping-cough in a child eight years old, who had sixty or seventy paroxysms daily. Glyco-heroin in twenty-minim doses every four hours soon reduced the paroxysms to between twenty and thirty a day, and the violence of the paroxysms were very much abated.

5.—The three children of Mrs. C. had whooping-cough; the baby one year old suffered very much, the paroxysms were very violent. In this case the results were very good and almost instantaneous; after the second dose of glyco-heroin the violence and frequency of the paroxysms abated, the child made a quick recovery. The other two children had very mild attacks, which I believe was also due to the glyco-heroin administered.

6.—E. D., sixty-three years old, had suffered for the past four years with chronic bronchitis; while being free from cough all summer, it seemed to increase in severity each winter, and he dreaded the return of the cold weather. I was called in September 28th and found him suffering with a violent cough and a great deal of dyspnea. With the aid of glyco-heroin I have stopped the cough; he has not taken any of the glyco-heroin since October 23d, and there has been no return of the cough. His present condition shows a complete cure.

In all tuberculous cases the cough diminished until practically absent, patients slept better, appetite increased, gained in weight, and the temperature reduced to about normal.

In several cases of whooping-cough where other remedies had been tried in order to relieve the paroxysms of coughing without result, with the use of glyco-heroin the results were all that could be expected, as there was decided relief from the paroxysms of coughing, and all were able to sleep and rest well.

In acute bronchitis glyco-heroin acted very promptly, and not alone was the cough relieved in a very short time, but also the whole general condition of the patient was rapidly improved.

In chronic bronchitis the preparation is very serviceable. The expectoration is facilitated and the dyspnea diminished, owing to the fact that the air enters more completely into the alveoli in consequence of the increased inspiratory force.

In bronchitis the results were also satisfactory. If the precaution of lowering the upper part of the body was observed to aid the patient to get rid of much of the accumulated secretions by gravity, a few small doses of glyco-heroin during the day and a full dose at bedtime would always make the patient very comfortable.

In pulmonary emphysema and bronchial asthma glyco-heroin is decidedly superior to any other remedy therefor used.

During the attack of asthma with the administration of this remedy respiration is stimulated, and the individual paroxysms were not only shortened, but the interval between the attacks is distinctly lengthened.

In acute pneumonia the results were very gratifying, since in most of the cases the harassing cough was speedily controlled and the patient's comfort was increased as well by the stimulation of the respiration, the dyspnea becoming much less marked.

And now, summing up all data of the clinical investigations carried on under my observation, I must say that we have here acquired a reliable, prompt and effective remedy with the following advantages:

A reduction of temperature.

Prolonging respiration and at the same time increasing the volume of each inspiration.

Almost devoid of hypnotic effect.

Absence of danger of acquiring the habit.

It does not weaken the respiratory apparatus.

Does not cause unpleasant disturbances of the stomach or intestines.

Is without deleterious effect on the heart.

The ratio of the therapeutic to the toxic dose is many times smaller than that of morphine or codeine.

Its decided beneficial effect in all dyspnea.

It does not constipate, or rarely, and then only slightly, and in these instances constipation was a chronic condition.

Acts as a stimulant to the respiratory center, and stagnation of the secretions is excluded.

And in comparative doses with codeine, the latter is shown to produce nausea and vertigo, while these symptoms are absent during the administration of glyco-heroin.

In conclusion, I would say that in all cases here cited, and many others as well, the instant relief obtained marveled both myself and patients. I have never with any remedy, for similar indications, enjoyed the confidence I have in this preparation, and now have the pleasure in not only having offered relief and cure in the cases wherein this remedy was first suggested, but now find glyco-heroin almost indispensable; and more especially so when I again consider codeine or morphine, with all their bad effects, as remedies compared with this preparation, which, on investigation, I found to be not only a true pharmaceutical product, but also an ethical product in every sense that the physician applies this term in designating a medicinal preparation worthy of consideration by the medical profession, and for this reason I feel no hesitancy in giving my experience with the same, but rather feel that any treatment of disease that proves of especial merit should always be brought to the notice of the profession.

The preparation is well worth investigating, and will surely prove a valuable addition to the "armamentarium" of every physician.

Membranous Croup.—The treatment of membranous croup has not met with such striking success as to render the introduction of a new remedy undesirable. And when this remedy comes to us with a long list of successes to back up its claims, they are assuredly worth investigating. We refer to the brown iodized calcium, which has proved a remarkable remedy in true membranous croup, the non-diphtheritic variety. For it has been shown that there is a membranous croup which is distinct from laryngeal diphtheria. For the former iodized calcium is presented as a specific; for the latter true calcium sulphide is likewise advocated. Both remedies are supplied by the Abbott Alkaloidal Co.

I have used aletris cordial with excellent results in the following: Miss R., nineteen years of age, brunette, well-developed, but troubled with dysmenorrhea, called at my office, and after explaining her affliction said, "Doctor, if there is any thing you can prescribe to relieve my suffering do so, for life is a burden to me now." I thought of the aletris cordial at once, and gave her a six-ounce bottle, directing her to take a teaspoonful three times a day, commencing four or five days before the regular period. Several weeks afterward she returned with the empty bottle, remarking, "I've come back for more of that medicine, for it's the only thing I ever had to give me relief. I can cheerfully recommend aletris cordial to the profession.—Edw. L. H. Barry, Jr., M. D., Jerseyville, Ill.

Interstate Medical Journal.

VOL. VIII., NO. 2. FEBRUARY, 1901.

Issued Monthly for One Dollar a Year.

EDITORIAL DEPARTMENT.

WARREN B. OUTTEN, M. D.,	-	-	-	EDITOR.
R. B. H. GRADWOHL, M. D.,	-	-	-	ASSOCIATE EDITOR.
OTHO F. BALL, M. D.,	-	-	-	MANAGING EDITOR.

Address all communications, news of medical interest, subscriptions, etc., to the INTERSTATE MEDICAL JOURNAL, CENTURY BUILDING, ST. LOUIS, MO.

MISSOURI GENERAL HOSPITAL.

Health Commissioner Max C. Starkloff has prepared a bill for introduction in the State legislature, providing for the establishment and maintenance, in or near St. Louis, of a general hospital for the care of such of the State sick and destitute as are not properly included or chargeable to the city of St. Louis. In the drafted bill the contemplated institution is named the "Missouri General Hospital." It is to be managed by a board of commissioners, four to be physicians, and five laymen; these commissioners to be appointed by the governor, and selected from the State at large. The board of commissioners to be empowered to appoint a superintendent and a corps of sixteen consulting physicians, as well as assistant physicians; the latter to serve for one year, and to be selected from the graduates of the several medical colleges of the State. A training school for nurses to be established in connection with the hospital, and professors of the medical colleges permitted to give clinical lectures to their students in the institution.

It is provided that any county court may send the indigent sick of that county to the hospital, said county paying to the State the cost of maintaining such persons. It is also provided that non-resident indigent sick may be sent to the general hospital by the sheriff of any county or by the chief of police of the city of St. Louis; such persons being cared for by the State at large.

The value of such a State hospital, and the necessity for its establishment, is apparent to any one acquainted with prevailing conditions. For many years indigent sick, not citizens of the city of St. Louis, have been brought here from all parts of the State, and the burden has been borne without complaint by the municipality of St. Louis. Civil justice, if nothing more, demands the establishment of an institution as described above. It seems strange to us that, while the commonwealth of Missouri carefully looks after its insane, blind, and deaf and dumb, nothing has been done for its destitute sick except in a casual way in county poor-houses, and similar institutions, but feebly equipped for such responsibilities. As stated above, many such patients find their way to the city of St. Louis, and become charges on an already heavily taxed community. Dr. Starkloff is to be complimented for the interest he has taken in this matter; and we hope that the members of the general assembly will take early action in regard to this important measure.

SOMETHING NEW ON GAS-PRODUCING BACTERIA.

The attention of the writer was recently attracted by an article which appeared in the *Muenchener med. Wochenschrift* for December 11, 1900, under the caption, "Die Beziehungen der unbeweglichen Buttersäurebacillen zur Rauschbrandaffection," written by Shattenfroh and Grassberger, of the Hygienische Institut in Vienna. The article deals with the probable relation that exists between the disease known variously as symptomatic anthrax, rag-picker's disease, etc. These investigators have been working with a bacillus which is productive of butyric acid, and is called by them the "granulobacillus saccharobutyricus immobilis liquifaciens." They have reason to doubt the specificity of the bacillus anthracis symptomatici discovered by Feser and Bollinger in 1878, and claim that their bacillus just named is as often found in cases of this disease as is that of Feser and Bollinger; furthermore, that if the bacillus of Feser and Bollinger is found in connection with the disease, symptomatic anthrax in cattle, that it is not capable of producing that disease alone, but that the granulobacillus saccharobutyricus immobilis liquifaciens is also present. In other words, they claim that undue credit has been given to the bacillus anthracis symptomatici as a micro-organic cause of symptomatic anthrax. In proof of their statements they made divers experiments, both with labeled "pure" cultures of the bacillus anthracis symptomatici obtained from State laboratories, and with meat said to have been cut from cattle dead with symptomatic anthrax. In some cases they were unable to kill susceptible animals, such as guinea-pigs, with these so-called pure cultures; and in the case of the tainted meat, they found their butyric acid bacillus alone in some cases, and in admixture with the bacillus of symptomatic anthrax in other cases. Hence, they reason that we should be chary about accepting the bacillus anthracis symptomatici as a cause of rag-picker's disease in man or symptomatic anthrax in cattle.

We mention the above mainly as a kind of introduction to our own views on the article written by Shattenfroh and Grassberger. In the very beginning of their article they take pains to mention the striking similarity which exists between their organism, the butyric acid bacillus, and the "bacillus emphysematis," which they quote as having been discovered first by A. Fraenkel, and later by Lindenthal and Hitschmann. We have had occasion before to refer to this bacillus emphysematis of A. Fraenkel. In the Shattuck lecture delivered this year by William Welch, of Johns Hopkins Hospital, the status of gas-producing bacteria was very well expounded; and in that lecture Welch demonstrated very clearly that the bacillus emphysematis of A. Fraenkel was nothing more nor less than Welch's bacillus *aerogenes capsulatus*, and mentioned the fact that Fraenkel himself has acknowledged it. Furthermore, Welch mentions the tardiness of Lindenthal and Hitschmann in reviewing medical literature of the present day, and scores them rightly, too. Now, here come Messrs. Shattenfroh and Grassberger, of the University of Vienna, with their detailed account of the workings of their butyric acid bacillus, which they say is the same as the bacillus emphysematis of A. Fraenkel. Where does the name of Welch's bacillus *aerogenes capsulatus* appear during the course of this learned discourse on a bacteriologic finding? We have searched through and through for some reference to it, but alas! nothing is left for us to conclude but that in their jealous haste to proclaim something to the scientific world that is not their own these two gentlemen have neglected to read all the literature on gas-producing bacteria. We venture to remark that if they had but perused the Shattuck lecture of Welch with as much zeal and attention as they have followed the investigations of Messrs. A. Fraenkel, Lindenthal and Hitschmann, that they would have had no occasion to relate their experiences with their "granulobacillus saccharobutyricus immobilis liquifaciens." In other words, we mean to say that Welch has carefully laid down the pathologic conditions which his bacillus *aerogenes capsulatus* is capable of provoking, and that the findings made by Shattenfroh and Grassberger can all nicely be explained as having been caused by a mixed infection with the bacillus anthracis symptomatici and the bacillus *aerogenes capsulatus*, or as having been caused by the bacillus *aerogenes capsulatus* alone, which, as we know, may give rise to a variety of infections both in man and in cattle.

This is another example of what little attention is paid by European investigators to the work done by scientific medical men in America. In previous writings on this subject we have commented on the injustice of this kind of treatment. We now merely wish to call attention to the erroneous propositions that will fill medical literature if this course be continued in by Continental workers. It is our right to demand that more care should be taken by these men to ascertain all, and not part, of the literature on any given subject. It is our privilege to condemn this method in the severest tones wherever it becomes apparent. And we need not say

that other journalists should follow in our wake. This is a crusade for justice and for the protection of science. There can be no greater barrier than this to stem the tide of this sea of jealousy, ignorance, sublime self-conceit, or whatever you may choose to call it. G.

SOMNAMBULISM.

The state commonly recognized as somnambulism is a most interesting one, and one that has been long clothed in a veil of mystery, so far as any definite knowledge of its etiology is concerned. It has been commonly taken for granted that the so-called "sleep-walkers" or somnambulists were persons who had been given the habit by their progenitors, and that it was nothing more nor less than an interesting (and often dangerous) heirloom which had been handed down through families. It seems now in the light of modern neurologic teaching that somnambulism is a symptom of disease, and that the disease which it may symptomize may be of three kinds, viz.: hysteria, hysterio-epilepsy or epilepsy. It does not surprise us to hear that somnambulism may symptomize hysteria, for we are prepared to hear of anything as being related to hysteria, but it is rather surprising to know that sleep-walking may be characteristic of an approaching epileptic seizure. That it is symbolic of this neurosis has been definitely verified, inasmuch as epileptic attacks often occur in these people while they are on one of their midnight prowls. The attention of the profession may well be called to this etiology, as good results follow on rational treatment—for instance, the bromides. By using the bromides in such cases it may often be possible to dispense with the "iron-bar and lock" method of treating somnambulism which has hitherto been so much in vogue.

WHERE DOES THE ABSORPTION OF IRON TAKE PLACE?

From the very beginning of advance in physiological chemistry, medical men who work along this line have interested themselves with the question of iron absorption in the intestinal canal, and some results of great value have appeared. The point about which most contention has been made is the site of absorption of iron, which is either taken in as food or is administered as medicine. Quincke and Lehmann positively state that the duodenum is the site of absorption for iron, and that the other parts of the alimentary tract play little if any rôle in ferruginous absorption. The latest work which has been done along this line is that of Cloetta, of Zurich. The article appeared in *Archiv f. exp. Path. u. Pharmacologie*, Bd. XLIV., H. 5 u. 6, S. 363. The work is an attack on the work of Quincke, and denies that the duodenum is the site of absorption for iron. Cloetta worked with mice, whom he kept on iron-free food for two weeks, and then were given 1 to 1.2 mg. of iron daily. The animals were then killed, their intestines hardened in alcohol and imbedded in paraffin and cut. By

treating the sections with Berlin blue he obtained the reaction which showed iron conclusively in the epithelial cells of the duodenum at its beginning.

This finding goes to show that all the knowledge pertaining to this subject has not yet been obtained; also, that we cannot rely on positive statements made on this subject until much more exhaustive work has been done. It is a highly important consideration, and it is to be hoped that everything will be done to clear it up. We can readily see how the therapist will rejoice when this question is settled. It means a great deal to the practitioner.

DISTOMA SPATHULA HEPATIS.

Simmonds, of Hamburg, is one of the few Europeans who has had occasion to see a genuine case of distomum spathulum hepatitis in man on the continent. As is well known, the disease is rather frequently met with in China and the far East, principally in cattle, but also in man. It is rare, however, in Europe. It is true that in East Prussia we meet with cases of distomum lanceolatum in cattle where it is endemic, and it sometimes attacks man when he eats this meat, but distomum spathulum is rare. The case which Simmonds had occasion to see was a German sailor who had been in China, and had entered the hospital at Hamburg for treatment of a case of beri-beri, but at the autopsy the worm was found in the liver and also in the blood. Most of the English writers who are conversant with this disease speak of extensive changes brought about by this distomum in the liver and gall-bladder, but in Simmonds' case there was not much in a pathologic-anatomic way to observe. The principal change noted was a swelling and proliferation of the mucous membrane lining the bile ducts. Beyond this, the liver was apparently normal. The eggs of the worm were found in the intestinal canal, making it apparent that the disease may be spread by means of the feces of man or animals sick with this disease.

G.

THE STATUS OF CHILDREN PRACTICE.

The woman's century has passed, and we are at the beginning of the era of the child. The last seventy-five years can be considered a forerunner of this era in two ways: in the establishment of many charitable institutions for children only, and in the wonderful progress made in the study of their ailments. The days of castor oil, calomel, paregoric, hoarhound and ipecac have passed for a physician who knows enough of physiology to judge, of pathology to determine, and of love and patience to devote to these little ones.

No reflection, no slur, upon the old doctor for those proceedings; he did what he thought best; and a coming century may smile at our feeble efforts, also. But when we hear a child cough we first examine his chest for a possible bronchitis or broncho-pneumonia; we watch the motion of both sides of the thorax, to be able to exclude pleurisy and an exudate; we

carefully listen to the quality of the cough, examine the child's throat and take the temperature, feel for possible enlarged glands at both sides of the neck, and then prescribe. "Why, doctor, our old family physician just looked at my babies and prescribed for them; it did not take him so long," remarks the venerable grandmother of the little patient; and if you have judgment, do not answer; the argument cannot be refuted. But the mother of to-day knows only too well that your work requires more time, more knowledge, and appreciates your painstaking. Or do you still expect to give a dose of ipecac, regardless if the child has a catarrhal tracheitis or a diphtheritic croup cough?

The writer witnessed the following case: Called at midnight as second physician to a child that had only a hoarse cough in the evening; he found the little sufferer suffocating with a diphtheritic swelling of the larynx, and injected antitoxin; the child recovered in about ten days. The first physician, upon inquiry about his diagnosis of the case, stated: "Oh, just a little cough; does not amount to a rap." Truly, such examples must vanish. Whatever introspection we may have in our mental storehouse of knowledge, let us never overlook where we are short.

The secrets of the artificial feeding of infants are beginning to be unraveled by our perfect knowledge of the constituents of mother's milk and the mode of its digestion, the perfect and honest analysis of the artificial foods and the physiology of their absorption. Mashed potatoes and barley, farina and mush are now relegated to a later stage, when ptyalin and amylopsin have appeared to convert starches (after the ninth month), and milk in its perfect form, sterile, *but not sterilized*, is given to infants.

The knowledge of the spread of diseases by milk is as new as bacteriology, the unfitness of poor milk as recent as medical chemistry, and the blessing of the diphtheritic antitoxin is more recent than either; and when we pursue the proper course on such lines we will seriously object to the marriage of consumptives, syphilitics, insane, alcoholics and epileptics, lessening the hereditary burden of an innocent newcomer into the world. A system of proper raising will bring a healthful and strong generation of good minds, for there is a healthy mind in a healthy body.

THE RETROGRESSION OF HOMŒOPATHY.

In a recent issue of *The Hahnemannian Monthly*, a contributor discusses the question, "Has Homœopathy Retrograded?" While candidly admitting that homœopaths "are not among the foremost in studying the causes of disease," yet he considers that his is "the only school having a scientific basis for the application of drugs to disease; all other schools being without a clear, reasonable and comprehensive method of procedure." He, however, comes to the conclusion that homœopathy is not progressing, and "that not to progress is to retrograde." The reason assigned for this condition is that homœopaths have attained the use of so many "proven" drugs that they have reached a degree of complacency which deters them

from making new "provings," or "improving old provings." He concludes his article thus: "We have advanced, but we are loitering now; resting on our laurels; waiting for something to turn up."

Poor things! It is sad to think that these members of "the only true school of medicine" have at last reached the end of their rope. In "proving" their completed list of drugs they have ingested every known substance, from diamond dust down to the excreta in a last year's bird's nest; and, if we are to believe them, they have discovered absolute specifics for every disease or symptom that may develop in the human economy. Why should they not "loiter now, resting on their laurels?" What further is there to "turn up?" Absolutely nothing, unless some second Hahnemann shall descend from another planet, bringing with him some substance which, in a millionth dilution, will resurrect the dead and stay the onward march of time.

A serious discussion of the question propounded is hardly possible under present conditions. In order to discuss any subject, it must be one capable of definition; and it is an admitted fact, even amongst members of the cult, that no man can tell what constitutes homœopathy in the present day. The teachings of Hahnemann are universally discredited by intelligent people, and with the acceptance or rejection of these teachings real homœopathy must either stand or fall.

The truth of the matter is that the more intelligent and successful of the practitioners styling themselves homœopaths, are men who treat disease by whatever remedies and methods they can command, reliance being usually placed on ideas derived from the regular school of medicine, notwithstanding the fact that it "has no clear, reasonable and comprehensive method of procedure."

When a system of medicine has reached a point where it admits of no definition, and where its fundamental tenets are discredited even by those who assume its name, it would seem that it has not merely retrograded, but that it is *dead* in fact, if not in name.

THE STATE MEDICAL ASSOCIATION AND THE LEGISLATURE.

One of the leading medical journals of this city has recently made the suggestion—and made it, we believe, in good faith and with the best of intentions—that the coming meeting of the Medical Association of Missouri shall be held at Jefferson City in February instead of May, the object of the change being to influence legislation.

The suggestion, which, we understand from those high in authority, will not be acted upon, is a good one—provided:

1. The association meets as a dignified body of scientists, and transacts business in the same manner as if the legislature were not in session.
2. Those members of the profession who are professional politicians, and whose records will not bear the search-light of investigation, be muzzled.

CHOREA AND ITS TREATMENT.

The treatment of chorea is one which appeals to both the pediatricist and the neurologist. It is brimful of goodness, and sends joy to the heart of the practitioner who has to deal with this disease. In no other nervous disease is treatment with medicaments so satisfactory as in the disease chorea. Intelligent treatment in this disease means cure for the patient and thanks from the parents. The disease has been sadly neglected in the past, and many cases have been allowed to continue, mainly because the medical attendant has been in the habit of regarding this disease rather "untreatable." This should not be, as we know of decided success in its treatment, where it is intelligently carried out.

In first order, children with chorea should be kept from school. There are several reasons for this: First, because the disease becomes worse when children are sent to school, where their surroundings tend to make them more irritable and peevish, and, hence, accentuate the disease. Secondly, it is a well-known fact that the disease is contagious in the sense that one school-child with chorea will infect the whole school-room. A remedy which should be tried first of all in every case is arsenic. It can be given in the form of Fowler's solution or as acid arseniosi. Together with arsenic, the galvanic battery should be utilized. The cathode pole should be applied over the region of the heart, and the anode over the spinal column, using about five or six milliamperes daily. After arsenic we can recommend antipyrin in this affection. It has a splendid effect, and its use should be rigorously persisted in until the benefits that usually come are seen in the given case. Utmost quiet should be enjoined upon these children. They should be put to bed early and should arise late in the morning. Applications of cold have been recommended, usually over the spinal column, although in many cases warm applications will be found more agreeable. Strict attention should be paid to the heart and its working. We know that endocarditis is often seen in this disease. With the following out of such treatment as above outlined, it can be confidently assured that beneficial results will accrue.

Professor Tripler, of liquid air fame, says that a spray of liquid air directed upon pathologic tissue is the safest and best means of operative interference; that a few days following this treatment the abnormal tissue sloughs off, giving the healthy parts a chance to heal, which process proceeds rapidly.

ORIGINAL ARTICLES.

POLYARTHRITIS DEFORMANS IN INFANCY; APROPOS OF A NEW CASE OBSERVED IN A BOY OF FIVE AND A HALF MONTHS.¹

BY DOCTOR MONCORVO, of Rio de Janeiro, Brazil,

Clinical Professor of Diseases of Children in the General Polyclinic at Rio de Janeiro;
Corresponding Member of the Academy of Medicine at Paris.

BOUILLAND affirmed, in 1846, that "age, whatever it may be, does not absolutely preserve against rheumatic arthritis," adding that this affection spares not even infants. Meanwhile his contemporary authors were silent upon the subject of infantile rheumatism. Despite even the scattered publications of some cases of acute rheumatism in young subjects, it was only in 1864 that the thesis of Claisse appeared; that is to say, the first complete work on acute rheumatism in early life. This was followed soon by that of Picot on the same subject. More recently, in 1896, Abrahams affirmed that acute articular rheumatism was more frequent in the newborn than was generally supposed.

Infancy then appeared to be a protection against the form of chronic rheumatism. In the first epoch of life, arthritis deformans was assumed to be unknown. According to Grisolle, this affection was unknown under the sixth year of life. Niemeyer, also, believed that infancy enjoyed an immunity in regard to this morbid condition. This view was shared by Behier and Hardy.

Finally, in 1871, the eminent Professor Jacoud thought the malady in question to be unknown in infancy and adolescence.

A bibliographic research has permitted me to recognize to what an absolute degree this view was held. In 1864, Cornil found at Salpêtrière a patient with chronic rachitic arthritis, dated from his twelfth year. The same year Laborde presented an analogous case to the Société de Biologie, the subject being a boy of four years. In 1865, Bouchut reported two cases: one in a girl and the other in a boy of three. Picot, of Geneva, mentioned in his inaugural thesis a like case in the service of H. Roger, the patient being a boy of seven. Other observations of this nature have been recorded. Barthel has cited a case in a boy of ten. Charcot soon mentioned another in a little girl, at Salpêtrière.

In the *Progres Medical*, 1876, Staicesco published three cases, relating to three girls of four.

In 1897, Dally and Blache reported two cases in boys: one of four and the other of seven.

¹ Written for the INTERSTATE MEDICAL JOURNAL.

In America, L. Smith (1877) gave an interesting history of chronic rachitic polyarthritis observed in a girl of three and a half years.

These thirteen scattered reports remained almost forgotten, when in 1878 I published, in Portuguese, a monograph which was translated into French by M. le Dr. Mauriac, of Bordeaux, and published at Paris. This treated of a case of chronic rachitic rheumatism in a girl of two years, terminating in a complete recovery.¹ It seems that this first complete work on this subject has awakened the attention of pediatricists, who soon brought to publicity in Europe and in America a certain number of cases of arthritis deformans in young subjects.

Such are the cases cited by Vulpian (girl and boy of four); Reymond (boy of fourteen); Laçaze Doré (girl of thirteen); Sene (girl of two); Decroizilles (boy of eight); Sergin (two girls of fourteen); Hensch (girl of thirteen and boy of eight); Wagner (girl); Potain (boy); Pelissé (girl of ten); Grancher (girl of five); L. Guinon (girl of eight); A. Garrod (child of nine and one of ten); Perret (girl of ten); Olinto (girl of four); Diamontberger (girl of ten); Cery (one case); Hanschatter (girl of nine); Jacobi (girl of five); Cheadle (child of five); Sturges (child of eighteen months); Markins (boy of three); W. Osler (girl of eleven); Fox (girl of six and a half); Finley (girl of eleven); Martinez Vargas (boy of eight and a half); and Pietro Porcelli (boy of three months).

This collection of cases proves that, far from being unknown in young subjects, this disease may be even observed in the newborn.

The case of Pietro Porcelli is a striking example, to which I wish to add another, which I have just seen at an epoch nearer yet to birth.

Observation.—Adalbert, five months old, was brought into my service on April 25, 1899. The mother, Portuguese, came to live in Rio about the age of fifteen. One month later she was taken with a lymphangitis of one leg. One year after her arrival she was affected with an arthritis of the interphalangeal articulations of the four last fingers of the left hand. This was followed by periarticular œdema, and by pain which was spontaneous or provoked by the least movement of these joints. The heat of the body was not, however, elevated. These manifestations were improved and even dissipated as a result of applications of the tincture of iodine.

She related that, from the first days of the eighth month of her second pregnancy, her knees became the seat of lively pain so that it was impossible for her to walk, although the knees were not swollen, nor red, nor hot. Eight days after this invasion, the metacarpo-phalangeal and interphalangeal articulations of the right hand became so swollen and so sensitive to the least movement that she was incapacitated from using them.

A fortnight after her accouchement these arthropathic conditions progressively improved to the point that, two months later, they were nearly in good order. I learned, further, that her husband presented, a

¹ Moncorvo: *De rhumatisme nouveau des enfants et de son traitement*. Paris, 1880. O. Doin, Éditeur.

year and a half before his marriage, a vesicular eruption which occupied nearly all the cutaneous surface, followed soon by pains in the bones of almost the entire skeleton, and of which he often complains as yet. His wife avers, in addition, that he was given to the abuse of alcohol for a year. Her delivery was normal, but the child, born at term, is thin and poorly developed. It was nursed at the mother's breasts.

Soon after there were crusts formed upon the hair of the head, snuffles, coryza, rhagades of the nasal openings, and also a vesicular eruption occupied the hypogastrium and the internal surface of the thighs—all of which disappeared at the end of four months. A little after there was, on each side of the neck, a gumma of the dimensions of a hen's egg. This child is puny, with an old expression, weighing hardly four kilogrammes, very poorly muscled, having the skin dry and rough, the hair of the head sparse and covered with thin crusts. The cervical and inguinal glands are swollen. According to the mother, it has had daily fever, and at the time of the first visit its rectal temperature was 38° C. Since two days, vomiting, bilious diarrhœic stools, and swelling of the spleen. It occupied with its mother a little low house situated at the side of a marshy ground, frequently visited by swarms of mosquitoes. But that which particularly attracted my attention was the deformity presented by several fingers of the two hands, which the mother insisted dated from the second month after birth. The following are the points which I have observed: Right hand—At the level of the metacarpo-phalangeal articulation of the thumb was a fusiform nodosity, enveloping the member completely. The skin there was somewhat red, but its temperature was not elevated. Palpation would seem to indicate that this amplification of the joints was due exclusively to the swelling of the soft parts which surrounded them, but this was put beyond doubt by a radiograph, which proved that the epiphyses of the bones of both hands were not involved. The slightest pressure or movement evoked signs of suffering. At the site of the first phalanx of the index and of the little finger was a nodosity like the preceding, the skin, however, being less red. The other articulations of this hand showed abnormal sensibility to the lightest touch. Left hand—Nodosities of the character just described occupied the metacarpo-phalangeal joints of the thumb, and the two first phalanges of the index and of the ring finger. The skin at these points was not sensibly warm, and hardly reddish. As in the other hand, there was pain on slight pressure or movement. The joints of the other fingers offered nothing abnormal except hyperæsthesia. The radiograph excludes the nodosities from the epiphyseal extremities. The fingers affected are maintained in semi-flexion in both hands. The toes remained immune from deformity.

The mother said that these joint deformities commenced in the right hand, the left hand being attacked later. I have twice seen the little patient, who was immediately treated for paludism, which he had on his

admission to my service. The malaria being improved, I decided, some weeks after, to make an examination at his home.

My assistant, Dr. Pietro de Fonseca, charged with this examination, then found the small joints affected more swollen and more sensible than the several other articulations of the two hands.

It was then impossible to attempt the last treatment addressed against the congenital syphilis, of which the stigmata were so apparent, nor yet against the polyarthritis deformans, which had aroused in me such great interest.

In the case just related there was no trouble in recognizing the typical characters of arthritis deformans, having commenced at the end of the second month of life; all of which has an interesting impression in view of the fact that the disease manifested itself at an epoch of life earlier than that of the case of Porcelli, the latter having commenced at the third month.

This affection has received, successively, diverse names—such as rheumatoid arthritis, dry arthritis, gouty arthritis, chronic progressive rheumatism, deforming chronic arthritis, symmetrical polyarthritis deformans, centripetal symmetric polyarthritis deformans.

The geographical distribution of these so-called rheumatic affections is far from being known with precision even to-day.

The confusion which has reigned upon subjects of this nature seems to have checked reports on these questions.

It has everywhere been believed that rheumatism was a rare affection in tropical climates. Meanwhile acute rheumatism was reported by Primer Bey in Egypt, by Webb in the East Indies, while Saint-Vel, Dutroulau, Rulfz de Lavison and Chassaniol had regarded as very rare in the Antilles cases of this nature.

From another quarter Malcolmson pointed out the frequency of chronic rheumatism in the Indies, as also had F. Rebatel and G. Tiraut at Tunis. According to Richard, rheumatic affections were rarely observed in French Cochinchina, in Taite, and in the "Iles de la Société."

Brissac declares having seen, at different times, in the Antilles, and in New Caledonia, infants affected with rheumatism, this trouble appearing to him more frequent in these countries than in Europe, by reason of the great susceptibility of the inhabitants to cold.

In my monograph, above quoted, I have indicated that chronic rheumatism was absolutely rare, even in infancy, at Rio de Janeiro; and more recently in lectures upon chorea, I have once more insisted upon this point.¹

Among the number of predisposing causes attending the cases of infantile polyarthritis deformans, which have been quoted, may be mentioned low dwelling places, badly lighted and moist, bad feeding (premature weaning, coarse food and insufficiency of food).

¹ Moncorvo: The Nature and Treatment of Choreia, *Journal de Clinique et de Therapeutique infantiles*, Paris, 1898.

These etiological factors have more value than has been given to them.

In adding the case just reported to the list already furnished of published cases, there is then a collection of forty-nine cases, which may be subdivided, according to sex, as follows: Boys, 15; girls, 29; sex unknown, 5.

This coincides with Charcot as to the marked predominance of females affected.

In analyzing the matter of age, the table is as follows:

2 months	- - 1 case	5 years	- - - 1 case	10 years	- - - 5 cases
3 "	- - 1 "	6 "	- - - 4 cases	11 "	- - - 2 "
18 "	- - 1 "	6½ "	- - - 1 case	12 "	- - - 1 case
2 years	- - - 3 cases	7 "	- - - 1 "	13 "	- - - 2 cases
3 "	- - - 3 "	8 "	- - - 4 cases	14 "	- - - 5 "
3½ "	- - - 1 case	8½ "	- - - 1 case	Age unknown	- 4 "
4 "	- - - 5 cases	9 "	- - - 3 cases	Total	- - - 49 cases.

If the facts are viewed from the standpoint of the three principal epogues of infancies the picture will be:

From birth to two years—six cases.

From three to seven years—sixteen cases.

From eight to fourteen years—twenty-three cases.

This calls forth the observation of the increase in frequency between the seventh year and the approach of puberty. Charcot called attention to the undeniability of hereditary tendency to rachitic rheumatism, as did also Heberden. I have already quoted that Boemer had three times seen the transmission of this piathesis.

Wolff has also shown that the placenta is the seat of transmission of this disease from the mother to the child. In nine cases out of fifteen he has found the staphylococcus aureus in the organs of the foetus, the liver being the first affected. This author admits that these micro-organisms may remain latent for years in the body. Hence, there can be no longer any doubt of the influence of heredity in the matter of chronic rheumatism.

Regarding arthritis deformans, even in view of the lack of documents on the subject, one is forced to the same conclusion.

In my first case nothing pointed to heredity, but in the maternal antecedents of my second the condition of the articulations was unmistakable.

The prepondering influence of cold as a causative factor, as maintained by Bean, was put in doubt by the report of Charcot's cases.

Briefly, the value of this etiological idea, as well as the nervous element as an influence, was supplanted by the microbial theory in 1894, Laçaze contending that active rheumatism is generally preceded by an infectious malady, which appears to open the door to the staphylococcus to play an important rôle. H. Meyer, of Basle, supported the same contention. Leyden has indicated the diplococcus as the agent in acute articular rheumatism, and further adds that he has never found the streptococcus.

MacLagan, of London, classes rheumatism among the infectious diseases, and attributes the poison of malaria to a parasite not yet determined.

Finally, more recently, Achalme and Thiroloix claim to have isolated from the blood of rheumatics a bacillus resembling the bacteria of carbuncles, which they have cultivated upon nutritive media.

Animals inoculated with these cultures presented articular conditions similar to those found in rheumatism.

The result of the efforts of these authors was certified by Triboulet, Cozon and Zadoe, in a communication to the "Société Médicale des Hôpitaux."

The first bacteriological investigation published as to chronic rheumatism was in 1893. In this year Max Schüller described a bacillus isolated by him from cases of this nature, in which the microbe was of 2 to 6 m. in breadth, and 75 m. in length, staining readily with carbolized fuchsine, and discolorizing easily at 25° C. in gelatine, in which they developed rapidly.

In 1896 Bannatyne and Wohlman examined the synovial liquid aspirated from twenty-five joints of polyarthritis deformans, and in twenty-four of these they found a microbe of the identical biological characters described, having a length of 2 m. and a breadth of 6 m. Their number varied in harmony with the intensity of each case.

At first sight these might be confounded with the diplococci, but closer study showed a bipolar bacillus, of which the central part was limited by two parallel lines connecting the two cocci in view.

In the five graver cases the examination of the blood around the joints affected revealed three times the bacillus in question, of which the cultures, injected into rats and rabbits, produced articular symptoms like unto those of human polyarthritis.

These authors add that in eighteen cases of pseudo-rheumatism (blennorrhagic) of tubercular synovitis, they have never discovered the bacillus in question.

Several drops of blood removed from around the small joints affected in my little patient showed some rare bacilli and leucocytes, the morphology of which resembled the bipolar bacillus of Bannatyne and Wohlman. Unforeseen circumstances prevented their cultivation and the inoculation of animals.

These researches, once definitely understood, should serve to disassociate polyarthritis deformans from similar affections. Thus, a like condition well established, on the one hand, and the appearance of polyarthritis in the first months of life, on the other hand, leads us naturally to admit the hypothesis of its foetal origin, as claimed by the author of this work.

Our actual knowledge on the subject of the anatomo-pathologic lesions of polyarthritis deformans in the young is yet quite incomplete, the malady having usually a tendency to recovery or to a stationary condition which prolongs it into the other periods of life; as, for example, in the case of

Cornil at Salpêtrière. That which appears beyond doubt are the primitive alterations found in the periarticular tissues, the ligaments and the synovial capsule.

It is only later that the osteophytic deposits are recognized in the joints affected.

Some authors, like Still, affirm that they have never observed inter-articular traces nor osteophytes. Garrod, Plerringham and Bannantyne have claimed a distinct separation between the polyarthritis deformans of infancy and that of adult life, the distinction being that the osseous tissues are spared, at least in the young. In the absence of microscopic examination, recourse may be had to radioscopy. This has permitted Finley to authenticate in his case the perfect integrity of the epiphyseal extremities at the site of the affected articulations.

In an interesting communication to the congress at Moscow (1897), M. Martinez Vargas, of Barcelona, cited his recourse to the X-rays. In his little patient, affected with polyarthritis deformans, the articular swelling did not extend to the state of hypertrophy of the corresponding bone, which showed nothing abnormal. The clinical characters offer some peculiarities worthy of remark. The course of the trouble may be rapid or slow, but the facts gathered from infantile cases point to a middle course as most common.

In the first place, the general symptoms are the most prominent; the fever follows, and ordinarily is of the remittent type. The articular symptoms then become marked, the swelling, redness and pain being as acute as in articular rheumatism, properly so-called.

In some rare cases, as in my little patient, the large joints are involved from the beginning.

In nearly all cases a symmetrical invasion is noted of a great number of articulations, these articular manifestations presenting the character of fixity.

The affected joints are the seat of pain of variable intensity, whether spontaneous or provoked, communicating itself easily to the neighboring muscles, which become retracted and are seized with spasms and cramps.

The acute or subacute conditions become attenuated, and are followed by articular lesions which have a slow course or remain stationary.

Besides there is an anæmia more or less marked coinciding with the general thinness and atrophy of the muscles of the members involved.

Bannantyne has found an increase in the number of leucocytes, and even a reduction of thirty per cent. to forty per cent. of the hæmoglobin.

In the case which I have just related, I was able to authenticate a sensible diminution of hæmatin, as well as an increase of the number of leucocytes, and the hæmatoscope of Hénocque showed a reduction in hæmoglobin.

According to Bannantyne, these blood changes reveal the action of toxines developed by the bacilli above described.

As a sequel, the joints remain nodulated, their ligaments and the respective muscles become retracted progressively, resulting in immobility, more or less complete, and the members assume a vicious position.

Again, in the graver cases a displacement of the articular surfaces, amounting sometimes to a subluxation, is found.

In some cases, as in my little patient, the synovial fringes undergo a fibrous transformation at the same time that the joints involved are surrounded by bony deposits, which respond to pressure by crepitation characteristic of rupture.

The symmetrical invasion of the joints is one of the characters of the course followed by the affection; this makes a clear distinction from gout. This symmetry extends to the involvement of the small joints.

According to the observations of Fuller, Trastour and Charcot, a certain immunity is enjoyed by the articulations of the thigh and shoulder as to polyarthritis deformans. An exception to this is cited by Pietro Porcelli.

Charcot had long ago pointed out the centripetal course of the lesions, which generally invade first the articulations at the periphery, and progressively reach the large joints. This mode of invasion is ordinarily the rule when the affection assumes a more grave aspect. The radiographic examination has sustained the contention of Still, who claimed a formal distinction between polyarthritis deformans and osteoarthritis.

The general benign character which infantile polyarthritis presents is due probably to this fact, which had formerly escaped clinical exploration.

A happy termination is, in the majority of cases, the rule, although, in some, the arthropathic condition may last into adult, and even to old age. The fixity of the arthropathic manifestations, their symmetrical and progressive invasion, and the circumscribing of the periarticular tissues and synovial fringes sufficiently clears the diagnosis.

As to treatment, iodotherapy and electrotherapy constitute to-day, the same as twenty years ago, the most sure means to combat infantile polyarthritis deformans.

Biliary lithiasis may be treated with some hope of success by persistent administration of sodium salicylate and benzoate, with general hygienic measures. The remedies should be given in thirty to forty-grain doses three times daily, before meals, and treatment should be given in only ten to twenty days of each month. The treatment should extend over a year or more, for it is only by persistence that good results can be hoped for in the medicinal treatment of this troublesome disease.

Gonorrhœal arthritis may be treated locally by an inunction of one part guaiacol with three parts olive oil. A teaspoonful is rubbed into the affected joint three or four times daily.

SUCCESSFUL CATARACT OPERATION ON A PATIENT NINETY YEARS OLD.¹

BY JAMES MOORES BALL, M. D., of St. Louis,

Professor of Ophthalmology in the St. Louis College of Physicians and Surgeons;
Ophthalmologist to St. Joseph's Ophthalmic and Surgical Sanitarium.

THIS paper will have the merit of brevity, if none other. On the last day of last year I was requested by Dr. A. C. Bernays to visit the Lutheran Hospital for the purpose of examining the eyes of Mrs. Catherine Bauer, aged ninety years, who had broken her right femur four weeks previously. I found a well-preserved old lady with apparently unimpaired mental faculties. She was in good health and as contented as any patient could be while undergoing the tedious treatment necessary in such fractures in old people. As regards her eyes, the right showed a mature, the left an immature cataract. Light perception was present, and the conjunctivæ and the ocular tension were normal. Since the local and general conditions were favorable, and knowing that age is not a barrier to success in cataract extractions, I advised removal of the lens of the right eye. I made the extraction with a small iridectomy and large corneal incision, on January 2, 1901, assisted by Dr. J. G. Ehrhardt, and in the presence of Drs. Hinrichs and Scharff. The incision in this case included almost half the corneal circumference, for the reason that I expected the lens to be a large one. (Priestley Smith has shown that the lens continues to grow throughout the life of the individual.) After the delivery the cornea collapsed and the iris presented its pupillary border on a plane considerably posterior to that of its circumference. This, however, did not cause any worry. The eye was dressed with ordinary sterile gauze and bandage. Healing was uneventful, and vision is now equal to counting fingers at two feet without a glass. It is yet too soon to adjust a lens. After the cataract glass is ordered she ought to see fine type. The operation was made under strict asepsis, the patient having been prepared personally by Miss Krauss, the efficient head nurse of the Lutheran Hospital. The preparation included shaving of the eyebrows, thorough scrubbing of the skin, and the application of a bichloride pack twenty hours before the operation.

While this is the oldest patient on whom I have operated, other ophthalmic surgeons have recorded cases of successful cataract extractions on persons still more advanced in years. Thus the late Dr. H. W. Williams, of Boston, operated on four patients between ninety and ninety-five years of age.

3509 Franklin avenue.

¹ Read before the St. Louis Academy of Medical and Surgical Sciences, January 15, 1901.

OBSERVATIONS ON INFLUENZA, WINTER OF 1899-1900, AND THE PRESENT EPIDEMIC.¹

BY ALGERNON S. BARNES, JR., M. D., of St. Louis, Mo.,

Consultant to City Hospital and Visitation Convent.

THE epidemic of influenza, as observed in St. Louis during the winter of 1899-1900, was much more severe in its effect on the respiratory tract than that of the several preceding winters. The conclusions of the writer are based on observation of cases in private practice.

The disease made no distinction as to social rank and was wide-spread, but did not seem to attack either the very young or the aged as generally as others. The nerve prostration after an attack was very severe, and when it did affect the aged many of them never regained their former health. The symptoms were similar in most cases. The persistent frontal headache, tenderness of scalp, severe pain in back of neck, and a low fever resembling typhoid, were the most pronounced. In some cases, during the early part of the disease, there was intense pain in one ear with bulging of drum, paracentesis giving a sero-bloody discharge. The pain was not relieved, and it was often necessary to resort to morphia and hot fomentations over the affected part. This sero-bloody discharge ran its course in about ten days without any pus formation, the hearing gradually increasing to the normal state. The mucous membrane of the nose was dry and congested.

A general complaint was pain in the throat, especially during the act of swallowing; but an examination would reveal little or no inflammation in this region. I ascribe this to rheumatic and neuralgic conditions. The cough was harsh and frequent, and accompanied by the expulsion of a large amount of white, ropy mucus, which underwent the change to yellow and then to a greenish color, gradually becoming normal. Occasionally a patient would complain of great pain in the pit of the stomach and over the abdomen, with diarrhœa, which, however, was not offensive.

The urine was scant, of a dark color and ammoniacal odor. The cervical glands were enlarged, usually on one side only, and were quite painful. The tongue was not furred, but thick, dry and red. One of the characteristics present in all cases was the pronounced odor coming from the skin.

The treatment which gave good success was as follows: A diet of weak tea without milk, broths, milk with white of egg stirred in it, dry toasted bread, and, where there was no delirium, twenty to thirty drops of brandy every two hours.

For the headache and fever, five grains of kryofine every three hours gave the best results. For the throat symptoms, salol and salophen every three hours, in five-grain doses, caused a rapid diminution of the disagree-

¹ Written for the INTERSTATE MEDICAL JOURNAL.

able symptoms in a short time. Calomel in one-tenth grain doses, with powdered chalk two grains, every hour, evacuated the bowels, checking the diarrhœa and relieving the congestion of the alimentary tract. In some cases a flannel cloth wrung out in a quart of hot water, with tablespoonful of spts. turpentine added, relieved the abdominal pain when left on the skin only long enough to redden it. For the cough, a preparation of nascent syrup of phenic acied, in tablespoonful doses to a half glass of water several times a day, gave relief. The urine was cleared in about twelve hours by the patient drinking vichy (Celestins). During convalescence the diet consisted of ice cream, cream, roast beef, beef juices, gelatin and broths. Tonics, as ozomoru, syrup of iodide of iron, arsenic and strychnia (one-fiftieth grain each after meals), were ordered. In cases showing involvement of bronchial tissue, Angier's petroleum emulsion, both alone and in combination, gave excellent results.

As soon as the patient was able to be propped up, he was dressed in his outdoor clothes and placed in a chair by the open window, so as to get sunshine and fresh air.

To sum up the treatment, the most successful was as follows: Treatment of symptoms: rest in bed, skillful dietetics, plenty of fresh air in room, together with frequent warm bathing. The principal remedies employed were: calomel, kryofine, nascent phenic acid, salol, salophen, and vichy water. Quinine was of very small value, giving no relief in the cases in which it was used. But with the most careful management, the prostration lasted for some time and the recovery was slow.

There were few deaths from the uncomplicated disease at time of attack, and there was noted a tendency to relapse. The disease presented the congestive features of all of the organs, with general vaso-motor paralysis. The abdominal, respiratory, nervous and rheumatic type were well recognized, alone or mixed.

The present winter, to date of writing, has been comparatively dry, but with changeable weather; and at the present time and for the past few weeks grippe is epidemic in the same form as the preceding winter, but presenting some new and different symptoms.

The first symptom is general malaise, and, quickly following, a stabbing sensation in the region of the tonsils, with aching bones and frontal headache. The throat symptoms become very acute, and the mucous membrane of pharynx and larynx becomes highly congested and inflamed, with an exudate of thick, tenacious mucus. In some cases complete aphonia is present, with a pinched epiglottis, for several days. There is considerable pain and rawness felt in the region of the vocal cords and trachea, resulting in a constant desire to cough. Cough and hoarseness becomes worse towards evening, and resembles the croup cough of children. This cough becomes more frequent and harsh, and after the second or third day there is a scanty excretion of thick, yellow mucus, which gradually diminishes with return to normal health. In some cases there

is pain in the chest, which, however, is of short duration. The membranes of the nose are congested and angry-looking and feel dry, but after several days the amount of mucus secreted is unusually large. The eyes are suffused and inflamed. Many patients complain of pain in the abdominal muscles, which is quite severe and lasts for several days. The tongue is white, but not furred. The breath is very offensive, but the marked odor from the body noted in the epidemic of the preceding winter is not present. The bowels in most cases are normal, and the urine dark, slight odor, but not scant; the amount of fever is very small and soon disappears. Pains in bones disappear in most cases during the first twenty-four hours; the headache and pain in throat last, however, for several days. The cervical glands are not enlarged; the ear symptoms in some cases are quite severe, but not as serious as last winter.

As in the previous epidemic, the treatment is largely symptomatic. Quinine in small doses, in combination with kryofine, relieves the pains in the throat and bones as well as the headache. The cough is best treated with heroin, in one-twelfth grain doses every three hours, and with ammonia chloride and pilocarpine, the usual cough remedies seeming to have no effect. Local treatment to the affected parts is of great value, and cuts the disagreeable symptoms short.

Altogether, I consider the epidemic of this winter as causing more painful symptoms and more general complications than that of the preceding one.

As to prevention, I would advise patients to remain indoors after dark, eat wholesome, digestible food, and dress properly. Bowels should be kept open and but little liquor used, and plenty of rest and fresh air taken.

S. E. Corner Grand and Franklin avenues.

Epistaxis which cannot be controlled by compression is best treated by thermo-cautery. Cocain should be introduced into the nasal cavity and the bleeding point located, after which the cautery should be applied at a dark red heat and held on the spot until cool, care being taken not to detach the eschar. A five per cent. zinc chloride solution may then be applied on a tampon.

Methylene blue is being used in the treatment of dysentery. A solution of two decigrammes of the substance in a pint of warm water is used as an enema three or four times per day. The enema should be given immediately after a motion of the bowels, and should be retained as long as possible. The remedy acts as an analgesic, antiparasitic and chologogue.

A CASE OF DISLOCATION OF THE HEAD OF THE HUMERUS, WITH FRACTURE AT ITS ANATOMICAL NECK.¹

By F. E. PREWITT, M. D., of Durango, Colorado.

A CASE was recently reported by Dr. Jepson, of Sioux City, Iowa, in the *Western Medical Review*, under the title, "What Should be Our Treatment of Fractures of the Anatomical Neck of the Humerus Complicated by a Dislocation of the Head," that affords an instructive parallel to one that came to my attention some time ago, and which, according to writers quoted by Dr. Jepson, is the one hundred and twenty-second reported.

My case is as follows: Dr. L. C. Haefeli, who practices medicine at Dolores, Colorado, sixty miles from my office, presented himself for treatment, suffering from what he thought to be either a fracture of the humerus or a dislocation at the shoulder-joint.

He is twenty-seven years of age, weight about one hundred and ten pounds, and he is in an advanced stage of pulmonary tuberculosis. He was driving a team which became unmanageable and ran away, and was thrown from the wagon, falling on his shoulder and left flexed elbow. I saw him about twenty-four hours after the accident, and the following symptoms were found: preternatural mobility, shortening, increased diameter of the shoulder when the arm was extended, the shoulder was flattened and the skin around the shoulder was badly discolored and the muscles bruised and swollen.

The patient not being able to stand a thorough examination without an anæsthetic, and realizing that I had a serious condition to deal with, I called in Dr. C. H. McLean. After the anæsthetic had been administered the following symptoms were easily made out, because of the small amount of muscular and adipose tissue covering the parts: the glenoid cavity was empty, and the head of the bone readily felt outside, crepitation at the fracture was evident.

The loose end of the bone was easily returned to the capsule, and as easily pushed out by slight pressure.

The diagnosis was clearly that of dislocation of the head of the humerus, with fracture through its anatomical neck. The dislocated head of the bone was replaced, the fractured surfaces placed in apposition, and the shoulder and arm to the wrist encased in felt, with the forearm at right angles to the arm, and brought across the chest and suspended in a sling; the whole arm was then securely bound down to the body with a muslin bandage. This dressing remained three days. Seeing it did not maintain the proper position, the patient was sent to the hospital and again chloro-

¹ Read before the St. Louis Academy of Medical and Surgical Sciences.

formed. The head of the bone was replaced in the capsule, the fractured ends brought together and held in position with a plaster of Paris cast around the shoulder and arm to the wrist. Extension was applied; in addition, an axillary pad was used and the arm placed parallel to the body.

The patient was kept in bed from three to four weeks, and the extension kept up. He suffered very little pain after this dressing, and recovered, as he expressed it, "with a perfect result."

The first idea on recommencing was to place the arm at right angles to the body from the shoulder, and maintain it in this position with the plaster dressing and extension; but this proved not to hold the fractured ends so well approximated as the method finally adopted.

Dr. Jepson treated his case by removal of the head of the bone on the second day after the injury, and says: "The recovery was uneventful and the patient was using the arm before the lapse of three weeks. Motion at the shoulder good, and the functions of the arm seemingly not materially disturbed."

With a limited experience in this class of injuries, this being my only case, my opinion must necessarily be taken for what it is worth.

Unless the head of the bone proved irreducible, I would assuredly treat a second case in the same way, and would allow time to elapse to convince me that the head of the bone had not sufficient blood supply to keep it alive before resorting to the more radical means of removing it.

There can certainly be no great damage done by leaving the detached head of the bone in the capsule for several weeks, even if it has to be removed eventually.

Pain in the lower limbs, or the slightest degree of limping in children, should lead to an examination of the hip-joints. Many cases of beginning hip-joint disease may be discovered at a time most opportune for treatment.

Puncture of the abdomen for ascites should always be preceded by emptying of the bladder. This is especially important in old men who may have retention of urine due to hypertrophied prostate.

Monsel's solution, placed under the ingrowing edge of a toe-nail, will tan the inflamed tissue and tend toward a cure. The application should be kept on for a number of days. The nail should be scraped very thin in the middle line.

Typhoid fever urine is infectious, and should be as carefully disposed of as is the feces. Turbidity of the urine is frequently caused by the presence of the typhoid bacilli. This condition usually clears up promptly on administration of urotropin or cystogen.



SCIENTIFIC MISCELLANY

By LAWRENCE IRWELL, M. A., B. C. L.

The Speech of Man and the Apes.—Dr. Chamberlain, in his able book “The Child: a Study in the Evolution of Man” (Contemporary Science Series), gives me credit for pointing out that “the development of man’s particular mode of speech is probably a correlative of the erect position so characteristic” of *homo sapiens*. Although this is my opinion, I cannot believe that I was the originator of such a simple hypothesis. It is not reasonable to suppose that organs anatomically so similar as the vocal organs of man and the anthropoid apes can be functionally very different. But, as none of the latter walks erect easily, their special method of communicating with their kind by sounds may not resemble man’s as closely as superficial observation would lead one to expect.

In considering the problem of speech among the apes, as compared with man, it must never be forgotten that the question does not involve the mental condition of highly civilized human beings; it is merely a question of the mental differences between the highest animals, below man, and the least civilized human beings.

Deaf-mutism—a Symptom, Not a Disease—Unquestionably Hereditary, if the Term is Properly Understood.—When deaf-mutism is mentioned in medical journals, it is usually referred to as a disease. Nevertheless, it is quite evident that it is no more a disease than jaundice or dropsy. Although the writer is not a physician, he has no hesitation in insisting upon the accuracy of this assertion. Deaf-mutism does not imply any single disorder. Just as a cough may be due to phthisis or to bronchitis, so may inability to hear be due to the non-development of some part of the organ of hearing, or to destruction of a part of the body by disease before birth, or to other causes.

It is occasionally stated in medical publications that deaf-mutism is not hereditary, and that deaf-mutes do not, as a rule, beget deaf children. The latter assertion may be correct, but the former is not, if the term “hereditary” is used in a scientific sense. Morel, in his “*Traité des Dégénérescences*,” says: “We do not mean exclusively by heredity the very complaint of the parents transmitted to the children,

with the identical symptoms, both physical and moral, observed in the progenitors. By heredity we understand *the transmission of organic dispositions from parents to children.*" If the transmission of identical symptoms were always necessary to prove heredity, epilepsy might be classed as a non-hereditary disease, for many epileptics have idiot children, and children afflicted with various neuroses, but no epileptics.

A further point of importance is that fully one-half of all cases of deaf-mutism are of an *acquired* character, having been caused by some injury to the auditory apparatus before or shortly after the power of speech had been attained. This form of the disorder is no more hereditary than is blindness produced by an accident.

Nobody who has studied the subject of deaf-mutism can doubt that it is very frequently transmitted. So eminent an authority as Dr. Clouston ("Neuroses of Development") says: "Ordinary deaf-mutism is closely allied to idiocy, and is one of the hereditary neuroses."

The oft-repeated suggestion that the marriage of the congenitally deaf should be prohibited is evidently made in ignorance of the fact that the hearing members of a deaf-mute family transmit the tendency to deafness with as great a probability of actual deafness in a future generation as do the deaf members.

The Causes of Longevity Among the Jews.—A great deal has lately been printed concerning the longevity of the Jews, and although they usually live longer than non-Jews, the statistics usually given must not be accepted without reservation. Mr. Ripley, professor of sociology in the Boston School of Technology, in his "Races of Europe" (Appleton, 1899), says: "Analysis of the causes of mortality (among the Jews) shows an abnormally small proportion of deaths from consumption and pneumonia. . . . This immunity can best be ascribed to the excellent system of meat inspection prescribed by the Mosaic laws." (p. 384.)

As far as I have been able to ascertain, this statement has escaped criticism. The pneumococcus, as all physicians know, is not found in meat, and there is no more connection between pneumonia and the inspection of meat than there is between gout and the wearing of spectacles.

The writer, whose blood is entirely Jewish, is not convinced that the inspection to which Jewish meat is subjected is always satisfactory, though it is in some cities. Moreover, Jews who are not strictly orthodox eat the ordinary butcher's meat; but tuberculosis among them is, nevertheless, quite uncommon. Again, the usual cause of phthisis is atmospheric infection, to which those Jews who work in sweat-shops and unsanitary tenements are always exposed. No amount of meat inspection can explain their comparative immunity to this source of disease. No doubt, the consumption of tuberculous meat may produce a general tuberculosis, which may develop into phthisis; but the milk of tuberculous cows is liable to do exactly the same thing, and systematic bacteriological examination of

milk for Hebrew consumers has never come under my notice. In some cities, among the ultra-orthodox, it may be done during the Passover, which occupies one week of each year.

The truth is that meat inspection, however scientifically carried out, does not save many Jews from tuberculosis pulmonalis, and no satisfactory explanation of their remarkable immunity to "the great white plague" has yet been given. To say that it is "an ethnic trait" throws no light upon the subject. One can assert with certainty, however, that the beneficent process of natural selection has done much for the Jewish people, for it seems to have eliminated those who inherited the tubercular diathesis, and it has apparently left only "the fittest," who are not susceptible to the attacks of the Koch bacillus. But as all other peoples (the Jews are not a race, says Professor Ripley) must have had ancestors who were subjected in like manner to the cosmic process, this explanation has a limited value.

Schools of Biology and the Drink Question.—Omitting extremists, the biologists of to-day may be divided into those who believe in the hereditary nature of such characteristics as are acquired during the lifetime of the individual, and those who assert that no reliable evidence exists that acquired traits are transmitted. It is almost unnecessary to say that the former are known as neo-Lamarckians, the latter as neo-Darwinians. Most embryologists, if not all, are neo-Darwinians, while practically all palæontologists are followers of Lamarck. Zoologists and botanists are divided in their views. Mr. Herbert Spencer, and the late Professor Eimer (of Tübingen), may be regarded as the champions of neo-Lamarckism, while Professor Ray Lankester and Mr. Alfred Russell Wallace—Darwin's celebrated co-worker—are among the foremost neo-Darwinians. The eminent Professor Weismann's opinions are so extreme that he belongs to a school of his own, which insists that acquired characters cannot be, and are never transmitted.

If a man becomes a drunkard at the age of about fifty, do his children born after that period inherit the drinking habit? I think not. Indeed, I deny that acquired narcomania is ever transmitted. Of course, a person inheriting the alcohol diathesis may keep sober until the age of fifty and may then begin to drink. Indulgence in alcohol generally increases the desire for intoxicating drinks. The more a man drinks the more, within certain limits, does he crave for drink. The limits vary very widely. In some men the simple taste of liquor will at once arouse a desire for deep indulgence. These men have the alcoholic diathesis, which is an inborn trait. How it originated we do not know, any more than we know what was the origin of innumerable congenital variations of a physical character, such as supernumerary fingers and toes. But we do know that persons born with the alcoholic diathesis become drunkards, unless controlled by moral or other deterrents. In ordinary men experience of liquor, no mat-

ter how prolonged, generally produces nothing beyond a desire for reasonable indulgence, because they were not born with the drink diathesis, and consequently are not tormented by an incessant craving for whiskey or wine. They are temperate, not because they resist temptation, but because the temptation is absent. Nevertheless, indulgence by the normal individual does sometimes increase the desire for alcohol up to a certain point. This increased capacity for enjoying liquor—a weakened ability to resist temptation—due to indulgence, is an acquired trait; and, therefore, if acquired traits are usually transmitted, the race which has longest used drink ought to be the most disposed to alcoholism. Each generation would inherit its father's capacity to enjoy alcoholic drinks, plus the increment caused by that parent's drinking. It is evident, then, that if there were a sufficient supply of alcohol, the desire would eventually grow uncontrollable, and the race would be exterminated. Upon the other hand, as men differ in the extent to which they crave for liquor; as those who crave most usually drink most; and as alcohol poisons most of those who consume the largest quantities, it follows, if acquired characters are *not* transmitted, that this elimination of the unfittest and survival of the fittest will at last result in a reduced susceptibility to great indulgence in alcoholic beverages, to the disappearance of the alcohol diathesis, and to the evolution of a more temperate race.

What are the actual facts? That savages, who have never been able to manufacture alcohol, are terribly drunken when they can get liquor; and that the Jews, and the inhabitants of wine countries generally, who have been able to get alcoholic drinks for innumerable years, are the most sober people on earth. *There has been no transmission of an acquired characteristic, but there has been a weeding-out process—a survival of the fittest.*

How to Restore Vitiated Air to Its Normal Condition.—Two French investigators, Messrs. Laborde and Gaubert, have made a report of their experiments in restoring breathed air to its natural state. It is, of course, certain that expired air, besides being deficient in oxygen, is also charged with carbon dioxide, vapor and other impurities. The experimenters in question say that they have discovered a chemical substance which, by simple contact with expired air, will restore to it its lost oxygen, while at the same time it will rob it of all its noxious properties. Three or four kilogrammes of the compound will allow a man to live twenty-four hours in a confined space without any fresh air being administered to him from outside. This discovery, if *bona fide*, will be most valuable in crowded workshops and stores, as well as to divers. In existing diving apparatus, caustic soda has been used to absorb the carbon dioxide, the oxygen being renewed from a compressed store of that gas. The name of Messrs. Laborde and Joubert's chemical substance is awaited with interest.

The Death Penalty Without Pain.—So long as the law of "a life for a life" is accepted by civilized nations, the grim question as to the most humane method of putting that law in force is one which is bound to come up for discussion from time to time. In New York State, the electrical process is resorted to, while in some other States the old method of hanging by the neck has been sufficiently modified to insure the instantaneous death of the culprit. There are foreign countries in which the death penalty is enforced in a far more ghastly manner. It has been reserved for the Japanese to suggest another system, which seems to be effective and at the same time free from the reproach of inhumanity. The condemned person is shut up in a lethal chamber, and by means of powerful pumps the air is rapidly withdrawn from it, and death at once ensues. Experiments upon animals point to the conclusion that this method is quite painless.

A Physician's Difficulty in Treating Female Patients in Afghanistan.—The Ameer of Afghanistan was treated for gout by native "physicians," who bled him and placed his feet in cold water. Before he would allow an English practitioner, Dr. A. G. Gray, to attend to him, he insisted upon the treatment being tried upon a gouty servant. So successful, however, was Dr. Gray that the Sultana, as well as her husband, desired his services. In the case of the lady, it was difficult to make an accurate diagnosis, as an inexorable custom necessitated the presence of a silk curtain between doctor and patient! The Sultana is said to still prefer the treatment of the native "physicians," and it is more than certain that Dr. Gray is most anxious that she should not require him to prescribe for her until Afghan customs are changed.

How to Ascertain the Average Expectation of Life.—About thirty-five years ago, a French mathematician (Demoivre) gave the following rule for calculating the age to which the average human being may reasonably expect to live. The rule, however, is not applicable to children under twelve, and it will not work with persons over eighty. Subtract your present age from eighty-six; divide the remainder by two, and the result will give you about the same number of years as the American Table of Mortality used by the life insurance companies. Before reckoning upon living for any time at all, it is well to have a proper examination made by a physician. It is, in addition, a good plan to have one's urine tested for glucose and albumin—perhaps for excess of uric acid—once a year.



Personal Comment

BY
RALGY HUSTED BELL, M.D.



Dr. C. F. Ulrich.—It will interest the readers of the *INTERSTATE* to know that in the near future will appear in these columns a sketch of the life and work of Dr. C. F. Ulrich, of Wheeling, W. Va.

It seems strange that many of Dr. Ulrich's ideas on sanitation and prophylaxis, which he has ably urged for over a quarter of a century, have been generally accepted only within the past few years. But the way of the pioneer is slow, and, like that of the transgressor, is sometimes hard. Nevertheless, it is highly pleasing to his many, *many* friends that the doctor is still hale and hearty—that he has lived long enough to see his theories blossom into practice wherever a great city disfigures our fair land.

A Fixed Idea.—“When not yet twelve years of age, I was knocked down by some unknown ruffian because I said, ‘Poor Aaron Burr! A sadly misunderstood man!’ This happened at the place of Fowler and Wells in New York City. I was standing with, perhaps, a dozen people, looking at some plaster casts of heads. Burr's was among the lot. No sooner had I spoken than a smashing blow in the face felled me to the floor. Who it was that hit me I never knew; he made his escape in the street. But the incident served to impress the image of Burr upon my mind. I have only to close my eyes now to see the plaster cast as plainly as I saw it seventeen or eighteen years ago.

“Even as a child I had taken deep interest in the biography of Aaron Burr and his beautiful Theodosia. My sympathies were always with Burr. Besides, I had met on several occasions a nephew of Alexander Hamilton, and was very unfavorably impressed with him. I remember, he was an old, old man, whose features bore a strong resemblance to the prints and pictures I had seen of his distinguished uncle. His name was Lucian, and he had many marked peculiarities. His opinions, as he expressed them, were dogmatic and hard. For instance, he insisted that the negro was not a human being. He accounted for his origin as the ‘sin of the white man;’ stoutly maintaining that he was half ape, and that the sensitiveness of his shin-bone was owing to the ‘fact that he had but one bone in his leg,’ and, therefore, when it was kicked, ‘it jarred his whole frame.’ A very ingenious argument, which, owing to my lack of anatomical knowledge, I was forced to admit. Mr. Hamilton also stated that negroes shed

their wool once a year, like brutes; and, moreover, that God had given them a distinctive odor which, interpreted, meant: 'Keep thou away, white man.'

"So, when my boyish sympathies and admiration for Aaron Burr were strengthened by a blow, they burst into flame. Ever after I loved him. His sorrows lived again in my own heart; all of his murdered ambitions were mine. It was my hand that slew Hamilton, and I gloated in the deed. It was my heart that broke when Theodosia came not up the watery world, as I watched for her at Battery Park. The spirit of Aaron Burr dwelt within me—and it dominates my life to-day. This idea is fixed, as hypnotists say—I cannot forget it; I cannot dispel it; I cannot even reason it away, do what I will. Now, what would you call it, doctor, the fixed idea of post-hypnotic suggestion? Bah!"

One of the brightest young lawyers of the Georgia bar told me this while we sat together one New Year's eve, in Atlanta.

A Modern Philosopher.—The medical profession has given the world many great names—names that will live a long time, as history goes. Many of our strongest thinkers have been doctors—at least in title. The greatest of these—away and beyond all others—was Charles Darwin. But I would concern myself now of our own more recent times.

Dr. William Colby Cooper has come to be one of the most-talked-of physicians in America. I do not mean by this that he is vacuously hailed by the mob. But by the thinking element of the profession he is widely discussed, and his views on medicine are gaining favor day by day.

Dr. Cooper has written much that is good on literary and other subjects. But some of his best work has been done recently on medical philosophy. His series of articles in the *Medical World* on "Therapeutic Philosophy and Hypermedication" attracted wide attention, and excerpts from that work have been translated into several languages and published in foreign journals with flattering comment. He has ably combated the foolishness of giving iron in anæmia, the tissue-feeding, and other humbugs. He has shown the fallacy of hypermedication and its positive harm. He has done more, perhaps, than any other American doctor to break down empiricism and encourage self-reliant investigation and independent thought among his brothers. It was he who first gave force and life to the "shock theory" of medicine; a theory destined to be accepted by doctors on the same terms that the "wave theory" is accepted by physicists.

His axioms have never been surpassed by any medical writer. In a few words he gives more wisdom than is found in some libraries. He says:

"There are a number of axioms underlying therapeutics which are as inflexibly true as those fundamental to mathematics. Thus,

- 1.—*No morbid effect can be dissipated except by a removal of its cause.*
- 2.—*What will make, or tend to make, a well man sick will make a sick man sicker.*
- 3.—*Medicine is medicine, food is food.*

4.—*Each drug has a specific affinity (kindly or not) for a particular nerve center.*

5.—*A drug, to be remedial, must not, at least in the long run, oppose natural reparative effort.*

6.—*A drug's capacity for doing good, when indicated, is invariably less than its capacity for doing harm when not indicated.*

7.—*A drug is double-edged, so that however much it may cut in the right direction, it will cut some in the wrong direction.*

8.—*There is no such thing as a drug tonic—drugs are heterogeneous to the animal organism.*

9.—*Hygiene is the big brother of drugs, physiology being included in this branch."*

"Some Medical Philosophy" is Dr. Cooper's late prize paper in the literary contest of *Merck's Archives*. In the whole history of American writers on medical topics, I know of no article of equal length that contains so much of genuine common sense, that shows so much reflection, or that suggests clearer scientific knowledge. And long years hence, when the dust of Dr. William Colby Cooper shall nourish the rose, and mingle its light with the stars of Lyra, his name shall stand with those of the philosophers who built wisely and well.

"**American Medicine.**" We are in receipt of an advance proof of *American Medicine*, the title chosen for the new medical weekly to be edited by Dr. George M. Gould and a staff of able assistants. To one who has done so much to raise the standard of medical journalism, we can do no less than wish Dr. Gould and *American Medicine* unqualified success.



A Clinical Treatise on Fractures. By WILLIAM BARTON HOPKINS, M. D., Surgeon to the Pennsylvania Hospital. Cloth, 268 pages. Price, \$4.00. J. B. Lippincott Co. 1900.

This book consists of a series of lectures delivered by the author in the Pennsylvania Hospital, so arranged and classified as to form a complete treatise on the subject of fractures. The work is liberally illustrated by skiagraphs. Special stress is laid on diagnosis of fractures, and the best methods of treatment are clearly explained.

Medical Diseases of Infancy and Childhood. By DAWSON WILLIAMS, M. D., Fellow of the Royal College of London, and University College, London; Physician to East Indian Hospital for Children. Second edition, revised, with additions by FRANK S. CHURCHILL, M. D., Chicago, Instructor in Diseases of Children, Rush Medical College. Philadelphia: Lea Brothers & Co. 1900.

This work does not profess to cover the entire field of medical diseases, those diseases common to children and adults being considered only as regards their bearing on the subject of pediatrics. It is exclusively a work on the diseases of children, and as such it is practical and complete.

A Manual of Syphilis and Venereal Diseases. By JAMES NEVINS HYDE, A. M., M. D., and FRANK HUGH MONTGOMERY, M. D. Second edition, revised and enlarged, with 58 illustrations in the text and 19 full-page plates. W. B. Saunders & Co., Philadelphia, Pa. Lewis S. Matthews & Co., 714 Pine street, St. Louis.

The present edition of this work has received most careful revision, many departments being entirely rewritten and much new material added. Many new illustrations and 19 full-page lithographic plates are presented. The value of the original edition is much enhanced and improved in this volume, and our readers will be well pleased with the result.

Diseases of the Heart; Their Diagnosis and Treatment. By ALBERT ABRAMS, A. M., M. D., San Francisco, Consulting Physician for Diseases of the Chest, Mt. Zion Hospital and the French Hospital. Illustrated. Pages, 172. Price, \$1.00 net.

This book discusses the subject of diseases of the heart from a practical aspect. Researches in methods of diagnosis are recorded, and the latest and most practical methods of treatment given in detail.

It is a valuable work, being the only book on this subject in a condensed form.

Urinary Diagnosis and Treatment. By J. W. WAINWRIGHT, M. D., Member of the American Medical Association, New York State Medical Association, New York County Medical Association, etc. Illustrated with numerous engravings and colored plates. Pages, 140. Price, \$1.00 net.

Among the subjects discussed are the following: Composition and Physical Character of the Urine; Normal Constituents of Urine; Abnormal Constituents; the Microscope and Microscopical Technique; Qualitative Analysis of Urinary Calculi; Bright's Disease, Diabetes, Gout, and other Conditions and their Treatment; Favorite Prescriptions, etc.

For its size, this book offers the most complete manual on the market.

A Manual of Surgical Treatment. By W. WATSON CHEYNE, M.B., F. R. C. S., F. R. S., Professor of Surgery in King's College, London; Surgeon to King's College Hospital, etc., and F. F. BURGHARD, M. D. and M. S. (Lond.), F. R. C. S., Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital, etc. In seven imperial octavo volumes, with illustrations. Volume IV., 383 pages, with 138 illustrations. Cloth, \$3.75 net. Lea Brothers & Co., Philadelphia and New York. 1900.

The preceding volumes of this excellent work have been reviewed in previous issues, when the general scope of the subject as handled was commented on.

The fourth volume bears the same relative excellence as Vols. I., II. and III. Summing it all up, it is the best work on the subject ever written.

Stringtown on the Pike. A Tale of Northernmost Kentucky. By JOHN URI LLOYD, author of "Etidorhpa." With illustrations. New York: Dodd, Mead & Co. 1900.

This little volume contains much of special interest to physicians. A qualified critic refers to it as not only the strongest, but best balanced historical novel of the century. Physicians will be attracted by the vein of mysticism that runs through the entire story.

MEDICAL TREATMENT.

The Management of Scarlet Fever.—In the management of scarlet fever, consideration has to be given to the fever itself, to the throat, the eruption, and the complications arising during the course of the disease, depending upon the invasion of streptococci, the absorption of toxins, and the development of nephritis. The first symptoms the physician has to combat are those of the throat. The usual pain and swelling, as well as the exudate, are alarming to the family and patient, as well as to the physician, and should receive as much attention as a diphtheritic throat. Above all, each case should be examined for the bacillus diphtheria. As treatment, large irrigations of warm water containing a small amount of carbolic acid or listerine should be made with the fountain syringe; older children should be made to gargle a saturated solution of chlorate of potash, a 1-500 potass. permanganate or peroxide of hydrogen diluted 1-4. Around the neck and throat applications of either ice or hot flannel should be made.

If pain in the ears accompanies the sore throat, hot applications should be made to them. Ordinarily the first throat symptoms do not lead to suppuration of the middle ear. Internally, a mixture of one-fiftieth grain corrosive sublimate in teaspoonful of the essence of pepsin makes a grateful medication. Locally, it is best to use only the mildest applications, if anything is necessary besides the irrigations. In cases where local treatment seems indicated, the use of the ordinary nasal spray with a weak solution of bichloride of mercury, the insufflation of sulphur lotion or powdered calomel, or, in extreme cases, the painting of the fauces with an aqueous solution of tincture of iodine, has proved successful. If the diphtheria bacilli are found, the antitoxin must be administered immediately.

The fever should only be treated if excessive; a temperature not going higher than 102.5° needs no further attention than a sponging with tepid water several times a day. If the temperature goes above 102.5° , or if there are severe nervous symptoms, the sponging should be used more vigorously and more frequently—even as often as every three hours. Of the antipyretics, phenacetin, protected by caffeine or strychnia, acts favorably and safe, and can be given every two or three hours, in doses ranging from one to three grains for the first ten years of life.

The eruption calls for hardly any treatment. The less grease is applied to the skin, and the more active the skin is kept, the better we counteract the effects of the toxins on the kidneys. The patient must be kept warm. A flannel union suit accomplishes this, and also acts as a protector against the dispersion of the desquamation. The room in which the patient lies should be kept at a temperature of 76° to 80° . If itching is severe, the skin should be rubbed with alcohol or oil of eucalyptus after each sponging. When desquamation takes place, the

patient should receive a hot bath daily, be rubbed vigorously, and have his underwear changed daily.

Of complications, the most dangerous are secondary infection with abscesses and nephritis. The minor complications, such as diarrhœa, a swollen spleen and gastric irritation, are due to absorption of toxins, and yield to a thorough purge of castor oil or Epsom salts.

The secondary infections are dangerous, depending upon the organ affected, the number of foci, and the rapidity of destruction. Little more need to be said about the secondary throat infections. These must be treated as the first, only more vigorously and with more regard for the more serious results. Adenitis is a frequent concomitant of the secondary sore throat, and must be closely watched for abscess-formation. Of great importance is the early evacuation of an abscess pointing in the throat or located in the tonsils. Next in frequency of infection are the joints. These must be immobilized at the first complaint of pain, and incised and irrigated as soon as pus develops. Endocarditis, pericarditis, and abscess of the liver are to be watched for in all cases in which the temperature does not promptly recede to normal.

Scarlatinal Nephritis.—Every case of scarlet fever should be handled as if the patient had a severe glomerulo nephritis from the beginning. The whole dietetic and medicinal management of scarlet fever should have as its main aim and object the integrity of the patient's kidneys.

The diet should be an absolute milk and water diet for the first twelve days; for the following eighteen days, a simple farinaceous diet, to the exclusion of all nitrogenous food, of which, of course, eggs, meats and broth head the list. The atmosphere in which the patient moves, his clothing and bed should be arranged to promote excessive action of the skin. The state of the digestive tract must be kept in as free a condition as is possible, and liquid, copious action of the bowels favored. All excretory action possible should be removed from the kidneys and thrown on the skin and bowels. Under such conditions we can fairly hope to limit the occurrence of nephritis; or, if it occurs, as it frequently will, in spite of our best efforts, counteract its dangers and change a frequently fatal disease into a simpler condition. The danger of nephritis begins with the tenth to the twelfth day. If at this time there is an evidence of albumen, the patient should be purged, and should receive a hot pack twice a day and kept in perspiration an hour each time; if suppression of urine occurs, the potassium citrate in thirty grains every two hours, or diuretin, ten grains every three hours, should be administered. Large doses of Epsom salts per os or enema, preferably the latter, should be given, and a dilatation of the blood vessels encouraged by the administration of nitroglycerin, one drop every hour, or pilocarpine hydrochloras one-eighth grain every four hours.

Treatment of Acute Articular Rheumatism.—Acute articular rheumatism is, fortunately, one of the diseases for which we possess a specific remedy. Sodium salicylate, salicylic acid, or the oil of wintergreen, act as favorably in acute articular rheumatism as does quinia in malaria. There is a dread, though, of the use of these drugs, which limits their use as well as their beneficent results. Acute articular rheumatism, when seen early, is very amenable to the salicylate treatment; and by cutting an attack short, we limit the dire results the disease achieves in the vascular system. The reason of a good many prolonged attacks of rheumatism can be found in the administration of doses entirely too small to influence the pathogenetic factor of the malady. In order to reach the desired result with sodium salicylate, we must stop short of no smaller doses daily than such as will produce thorough salicylism. Begin with a daily dose of fifteen grams, or one-half ounce, for a man weighing one hundred and fifty pounds, divided in three hourly doses, or thirty grains every three hours, the first day. On the second day the dose is cut down to one-half, and again, on the third day, by one-half. If the patient's temperature falls to subnormal, the drug is discontinued for one day, and strychnia administered on the following day. Seven grains every three hours are again administered for two days. Occasionally we meet cases which respond badly to the salicylates. In these we have to rely on the alkaline treatment, and should administer large doses of soda bicarbonate, potassium citrate, and lithium citrate. But no case of articular rheumatism should be allowed to go on without at least a fair trial of the specific treatment.

Treatment of Influenza in the Adult.—Opium and all measures that depress the circulation should be avoided. When the infection is carefully treated, it should leave no trace on the healthy organism. Our anxieties are awakened when we deal with epidemic influenza in alcoholics, diabetics or in persons afflicted with cardiac or arterial diseases. With the avoidance of depressing agents and observance of antiseptic treatment, our results should be uniformly good in a very large percentage of patients. The use of salophen in ten-grain doses is to be recommended. The persistent use of quinine and the hot baths, with mild anodynes, in the early stages, will modify the disease and tend to abort the attack.

Gonorrhœal Rheumatism.—If the prospects of treatment of acute articular rheumatism are poor, gonorrhœal rheumatism is certainly to be classed amongst the most hopeless of the rheumatic affections. Gonorrhœal rheumatism is as painful, as dangerous, as its cousin-german, and has the distinction of affecting joints otherwise not attacked by rheumatism, such as the temporo-proxillary and sterno-clavicular, which, by their limited space, cause more excruciating pain, and, as in the case of the jaw, immobilization being impossible, make the treatment of these

cases quite a problem. As the pathogenesis of gonorrhœal rheumatism is still dark, we have to give due credit to all possible conditions for the production of the ailment, and amongst these to bear in mind that a patient developing gonorrhœal rheumatism early in the course of his gonorrhœa, may have become afflicted thus owing to the particular mode of treatment pursued. The instrumentation of the urethra leads to the development of urethral fever, muscular pain and joint pain; and, reasoning on analogous grounds, we cannot help but suspect that irrigations and injections may, under certain conditions, produce the results commonly classed as gonorrhœal rheumatism.

Yet, on the other hand, as long as the gonorrhœal discharge persists, the patient is liable to the attack of his joints, and the cure of the rheumatism is paramount with the cure of the gonorrhœa; this certainly seems a riddle the solution of which seems far distant. A rational way out of the difficulty is to suspend local treatment of the urethra and substitute a general systemic treatment. The patient should keep to his bed, or at least to his room, should be strictly dieted, and receive as treatment only diuretics and balsamics. Little or nothing can be done for the rheumatism itself. Large doses of salol or salicylate of sodium have relieved some patients, while they have seemed absolutely inert in others. The painting with iodine seems to aggravate most cases, while the application of forty per cent. ichthyol has given but indifferent results. For the pain, immobilization, as far as possible, and full doses of morphia must be resorted to. Hot bichloride packs have acted very favorably in a number of cases, while ice bags placed near the affected joint have relieved others, although a smaller number. Lately the inunctions with mercurial ointment have proved successful in aborting the attack and relieving the pain. The ointment is either rubbed into the affected joint or applied in a form of cataplasm.

This method has also proven itself of great value in pleurisy of gonorrhœal origin. The internal medication of the later stages should consist of urinary antiseptics, antiseptics and absorbents. In the first class cystogen and urotropin have proven of good effect. As a general antiseptic, the bichloride of mercury heads the list, and has seemed to relieve many cases in which it has been administered. It is either given in gr. one-fiftieth every two hours in the essence of pepsin, or in gr. one-twelfth, t. i. d. As absorbent, the iodide of potash plays the role it maintains in all exudative diseases, and gives sufficiently good results in ten-grain doses. Only if a luetic history is obtained will it be necessary to increase the dose to heroic heights. A large percentage of gonorrhœal joints develop pus; these cases must be relieved promptly by incision, irrigation and immobilization.

With the havoc the gonococcus plays in the urethra and pleura, it is remarkable to notice so few suppurative joint affections due to gonorrhœa.

Unclean Mouths.—(By M. H. Fletcher, M. D., Cincinnati, Ohio.)—Miller has studied over one hundred species of bacteria which he has found in the mouth. He says: "Dental decay is a chemico-parasitical process." He has shown that all forms of dental caries are but expressions of bacterial invasion of the solid structure of the teeth, and that such invasions may extend far beyond the confines of the teeth alone, and produce possibly fatal mischief in distant parts.

Roswell Park says: "Aside from dental caries, a widely open port (to bacteria) is often afforded by those ulcerations around the margins of the gums which are produced by the accumulations of tartar." He further says: "Disease of the antrum of Highmore, and many other local disturbances, are frequently caused by mouth bacteria. * * * One of the most virulent of all the common inhabitants of the mouth is the pneumococcus of Frankel, which, getting into the general circulation through the tonsils and other possible ports of entry about the mouth, cause serious septic and inflammatory disturbances in widely distant regions."

The dorsum of the tongue, with its fissures, glands and spinous processes, affords lodgment for bits of food, broken-down epithelium, mucus, etc. These are all perfect pabulum for bacteria, the moisture and heat of the tongue adding all that is necessary to make the tongue a most perfect breeding-ground for bacteria. The foregoing leads us, also, to consider what part may be assigned to the mouth as a breeding-place or starting-point for infection of the digestive tract.

The observations of thousands of physicians sufficiently prove the occurrence of abnormal fermentive processes in the stomach, and no one can deny that such processes may occur in the stomach where functions are otherwise normal as well as in diseased ones.

Miller says: "There can be no question but that microbes are carried from the mouth into the stomach every time food is taken. The view formerly held, that the swallowed germs perished in the stomach, is entirely erroneous, as I myself have shown, and as has since been corroborated by MacFaydan, Sucksdorf and others. * * * From a neglected mouth, such as repeatedly comes under the observation of dentists, enormous quantities of bacteria must reach the intestinal tract, in spite of the sterilization of food. In a very unclean mouth, examined for this purpose, I estimated (by culture methods) the number of cultivatable bacteria at 1,140,000,000. Many of them were, doubtless, carried to the stomach during every meal, to be replaced by others developed between meals and over night. * * * Von Koczorowski proves clearly that the micro-organisms in an unclean mouth, quite independently of those introduced with the food and drink, suffice to produce intense fermentive processes, chronic dyspepsia," etc.

Numerous investigators have written on the buccal secretions as carriers of toxic substances, and bacteria as excitants of disease, to which the reader is referred.

Your own observations, doubtless, corroborate what these investigators say regarding the dangers from mouth bacteria. But how to reduce these dangers is the question at issue. To keep the mouth absolutely free from disease germs is too optimistic a view for us to entertain.

It is apparent, however, that four ways are open for greatly reducing their number:

First.—By hygienic means to secure the best possible development of the teeth, glands of the digestive tract, and the digestive tract itself.

Second.—By keeping the teeth intact, preventing accumulations about them, and by repeated, thorough and systemic cleansing of the oral cavity and all it contains.

Third.—By proper and intelligent use of antiseptics to destroy bacteria, or at least to limit their number and activity.

Fourth.—By prohibiting or limiting the consumption of such foods as are known to greatly foster the growth and development of fermentive and putrefactive bacteria.

Lactic acid, the greatest destroyer of the teeth, is formed in the mouth most largely by the action of bacteria upon cooked starches, next by their action upon sweets. The fermentation of carbohydrates results largely in the production of acids. These, with all acids taken in the mouth, assist in the destruction of the teeth, each cavity in them forming an uncleanable incubator for all varieties of bacteria. According to Miller, albuminous fermentation, or putrefaction, results most largely in alkaline products, but the acids predominate and destroy the alkalies.

We cannot banish carbohydrates from our foods, nor can we largely control the development of the digestive tract and teeth to the degree of immunity found in wild animals in their native state; but we can reduce the sweets and pastry to a minimum, thus reducing the tendency to decayed teeth and fermentive indigestion from these sources.

The most practical and common-sense procedure has been mentioned, namely: have all the cavities in the teeth filled before they become large; then the teeth are cleansable on every surface. Cavities can only be made aseptic by being perfectly filled with a properly selected stopping material.

Next, prevent accumulations about the teeth by the use of a stiff serrated tooth brush and a good coarse powder.

Follow this with an alkaline antiseptic, preferably one soluble in the saliva. If such an ingredient could be incorporated with the tooth powder, all the better. An alkali is essential, because the mucus of the saliva is only soluble in alkaline fluids; so that if the mouth, tongue, and teeth are to be perfectly cleaned, it must be done with an alkali of some kind. This should be as strong as the mucous membrane will permit of, when used frequently; for if the mouth is kept clean enough to prevent decayed teeth, diseased gums, and stop a continual supply of bacteria to the alimentary tract, it must have attention at least twice a day, even with the most healthy mouth, and two or three times as often with the majority of persons. This is especially true with invalids, where sordes incline to accumulate with great rapidity, and particularly in the early stages of mycotic stomatitis.

NEW REMEDIES

The Treatment of Specific and Non-Specific Vaginal Catarrhs.—(By Charles W. McIntyre, M. D., New Albany, Indiana.)—I have selected this title because it will enable me to discuss the treatment of vaginal discharges, whether they be of a specific nature or not, and because they present many features of sameness. It is impossible at all times to differentiate the various types of leucorrhea as they are classified in the text-books; and, indeed, a knowledge of such a classification will throw but little light on the treatment of these catarrhs.

In practice I find it only necessary to ascertain whether the vaginal discharge I have under treatment is of a specific nature or not. This information enables me to inform my patient that she may infect any one who approaches her.

The fact that vaginal catarrhs are often found to stubbornly resist treatment is no evidence of the specific nature of the discharges.

Many cases of leucorrhea free from any taint are quite stubborn, and persist for a long period.

Again, vaginal catarrhs are particularly exhausting, and there are few diseases which induce the debility and invalidism which accompanies a protracted attack of leucorrhea or gonorrhea.

We may now pertinently ask what is the best treatment for these vaginal catarrhs?

There are two demands for treatment. The first being to correct any local or constitutional factor of causation that may be present in the case under consideration. If, in other words, our patient has anemia, syphilis or any other constitutional disease, that must receive appropriate treatment.

Any local condition, as laceration of the cervix, must also receive correct treatment.

The *second* demand for treatment consists in the local applications of remedies directly to the inflamed tissues.

There is no doubt that this is by far the most important demand for treatment, because when correct local treatment is employed, the discharges cease and the debility of the patient will naturally be lessened, and improvement in every way will be a natural outcome.

I have long since ceased to employ copaiba and the old specific remedies in the treatment of vaginal catarrhs. These agents are of uncertain value, and they often entail severe gastric irritability, which makes the patient's debility all the more pronounced.

In the treatment of both the specific and non-specific types of vaginal catarrhs, I have in the last three years employed Tyree's antiseptic powder largely, and my results have been all that I could desire. In fact, no remedy has ever brought the quick and satisfactory results which I have at all times obtained from this remedy.

I have one or two teaspoonfuls of Tyree's antiseptic powder dissolved in a pint of water, and this is injected three or four times daily, according to the profuseness of the discharge.

The powder is non-irritating and antiseptic, and the odor, often so unpleasant and compromising in these cases, speedily disappears after its employment is begun.

In gonorrhea or non-specific catarrh this powder is alike efficient,

and brings about a cessation of the discharge more quickly than any agent I have ever employed. I may add that I have never had a failure since I began to employ this agent.

A young married woman came to my office about four months ago, asking for treatment of "whites," which had now persisted two months. The discharge was purulent and most profuse. Examination of the discharge under the microscope confirmed my suspicion that she was suffering from gonorrhea. She was put on Tyree's antiseptic powder (two teaspoonfuls to a pint of water) three times daily. In a week the discharge was greatly diminished, and she used the injections only once or twice daily. At the end of the second week she had scarcely any discharge, and only employed the douche every other day.

I lost sight of this patient, and did not see her until three weeks ago, when she told me she had had no further discharge, and had gotten on well ever since.

I must not forget to add, in this connection, that this patient took no internal treatment whatever.

A lady applied for treatment of leucorrhea which had persisted for a year. The drain on this patient was very great, and she was, as a consequence, very much debilitated.

I put her on Tyree's antiseptic powder, as in the above case. This lady was given no internal treatment, although she had more or less anemia. I believed that when the discharge was discontinued the drain on her system would cease and the untoward symptoms would disappear. This proved to be true, and my patient made a complete recovery, which occupied four weeks. The patient's gain in flesh and her change from a nervous, melancholy person to a bright and cheerful one was quite remarkable.

A lady, forty-two, came to the office for a prescription for some remedy to cure an attack of leucorrhea that was most profuse. She was a widow, and, from all that I could glean from her history, I thought the discharge of a specific character, though I did not make a microscopical examination.

She was put on injections of Tyree's antiseptic powder, and this was continued a week. On coming to the office she declared she felt a great deal better, and that the discharge was most meager. After this she employed the douche only once a day, and made a complete recovery after having employed the treatment, in all, three weeks.

A young woman, aged sixteen and unmarried, had vaginal catarrh which was quite profuse, and it was also quite odorous. She had an inflamed, tender vagina, and was considerably debilitated.

She was put on Tyree's antiseptic powder, three employments daily. After a week she only used it at night. The end of the third week this lady had no further discharge, was greatly improved in strength, was in fine spirits, and now, in four months, has had no further discharge.

Antiphlogistine.—In a previous issue we directed attention to antiphlogistine, giving its formula and therapy. We wish now to point out its value in la grippe. Warmed and spread on the upper part of chest and over the throat, covered with a compress, it will relieve the bronchial symptoms in a very short time. Its value in pneumonia is generally recognized, and it is equally efficacious in grippe-pneumonia.

Interstate Medical Journal.

VOL. VIII., NO. 3. MARCH, 1901.

Issued Monthly for One Dollar a Year.

EDITORIAL DEPARTMENT.

WARREN B. OUTTEN, M. D.,	-	-	-	} EDITORS.
WILLIAM PORTER, M. D.,	-	-	-	
R. B. H. GRADWOHL, M. D.,	-	-	-	
OTHO F. BALL, M. D.,	-	-	-	
				MANAGING EDITOR.

Address all communications, news of medical interest, subscriptions, etc., to the INTERSTATE MEDICAL JOURNAL, CENTURY BUILDING, ST. LOUIS, MO.

SURGICAL COMPLICATIONS OF GONORRHOEA.

Not only does the disease gonorrhœa demand the attention of the medical world because of the ravages which it produces on the male and female urethral mucous membrane, but it also demands attention because of the surgical disease which it may produce. The most frequent complication of gonorrhœa, from a surgical standpoint, extra urethra, is arthritis. This is a most frequent complication of gonorrhœa, and is one which is liable to occur at any stage of the disease, both in its acute and chronic forms. It sometimes occurs a year after the original acute attack, when the patient is in that stage known as chronic gonorrhœa, or even in the so-called "gleet" stage. Any of the large joints may be affected, usually the knee or elbow-joint. It is possible, however, to have a gonorrhœal arthritis of the hip-joint, of the ankle-joint, or, in fact, of any joint in the anatomy. The tendency at first is to a considerable effusion around the joint, and this effusion is mostly of the sero-fibrinous order, rarely suppurative. The tendency of this arthritis is to affect the synovial membrane and also the para-articular structures so that an ankylosis is often sure to result as a consequence of the destructive nature of the process. The treatment of these arthritides of gonorrhœal nature is at first energetic massage with iodine tincture, then immobilization, usually with a plaster splint; often puncture of the joint is necessary, and, again, opening of the joint surgically is to be recommended. In cases where the hip-joint is affected extension is sometimes resorted to with good results. König, of Berlin, reports eighteen cases of arthritis gonorrhœica of the hip-joint where extension was used with good results.

Another important complication of gonorrhœa that now comes to the surgeon's hand is a purulent affection of the kidney pelvis, due to the extension of the gonorrhœal process from the urethra and bladder to the ureter and kidney. It is an open question just how this is brought about—*i. e.*, whether it is due to surface extension along the ureter and thence to the renal pelvis, or whether it is due to a traveling of the gonococcus through the lymph spaces and vessels from urethra to pelvis. Certain it is that gonococci gain access to the kidney pelvis in cases of urethral gonorrhœa, and it is the surgeon's duty to treat these cases. The prognosis is rather favorable, and surgical measures early resorted to will bring about favorable results. The main difficulty in the management of these cases is the masking of symptoms so that the disease may run on for a long time with pouching of the pelvis, pyelonephritis, etc., before the diagnosis is made. Where both kidneys are affected, prognosis of course is much worse. It is in this condition that the efficacy of ureteral catheterization is brought into play in the establishment of diagnoses. With such modern appliances for diagnostic endeavors, certainly the complication can be early and intelligently dealt with, and the patients can be given the best chances for recovery. The point to be emphasized in this connection is that the medical profession should learn to look for these complications before it is too late; the day has passed by when gonorrhœal pyelitis or pyelonephritis is a rarity. It is now quite commonplace.

APPENDICITIS—WHAT SHALL WE DO WITH IT?

Again we find it timely to say something about appendicitis and its treatment. More than once have we had occasion to treat this subject editorially; more than once have we reviewed the literature on the subject, massive though it be; more than once has the writer talked the matter over with surgical brethren, first in America and now in Germany. We respect the opinions of Morris, of Price, and of others of renown in matters "appendicular" in the United States. Shall we say that we do not respect the dicta of Bergman, of Czerny, and of Erb and v. Leyden and Gerhardt? Let us then proceed, confident that we possess a thorough knowledge of what has been done by the medical leaders on both sides of the Atlantic, and trusting that our opinion is formed on rational and impartial grounds.

In rational order we might say that the pathology of appendicitis is purely an inflammatory condition in or about the region of the appendix vermiformis. Don't let us quibble now anent the misnomer "appendicitis." This inflammation usually means that a break has been made in the mucosa of the appendix, and that pathogenic organisms, usually the colon bacilli, have begun their depredations, and that a purulent infiltration is liable to ensue, if aid from without does not swoop down on this little relic of our Simean ancestry and render the parts aseptic and well enough to recover *de causis naturis*. Robert Morris, of New York, that

master of the beautiful little operation for appendicitis, believes in early operation, and quick operation, too. Joseph Price, of Philadelphia, stands beside Morris and says operate on all cases if seen early enough, and if the patient has appendicitis; and don't say, because you cannot find the appendix vermiformis, after opening the belly, that the appendix is "normal." Many others of renown say the same thing. What remains to be said? We offer up our little voice and say with these great men: operate in every case of appendicitis if the case be a true one; if the patient has been seen early enough. But, please, let the operation be done by a surgeon.

With an affection the nature of which is often fulminant, leading to suppuration and gangrene and general peritonitis, it is beyond our reason to find cause for temporizing. Once the diagnosis be established let the swift, sure knife of the surgeon "do the rest." The absurdity of waiting is perfectly apparent to those who have eyes and see. Fortunately, it is much easier nowadays to get both medical and lay brethren to see things our way. Hence, delay nowadays is so much the more criminal and foolish and usually means loss of useful lives that might have been saved.

Who can doubt this statement who has seen the disease in its clinical behavior, who has seen the surgical results of surgeons, and who has studied the principles of pathology? Who can dare hope to convince us that it is good treatment, that it is rational therapeutics, to give morphine or purgatives to a man with an appendix in the various stages of inflammation purulenta? Where is the medical ass who stultifies himself into the belief that he can resorb pus with an ice-bag? If he can be found—and close search will reveal him, mayhap flourishing in the metropolis, mayhap sequestering 'mid the sweet smell of timothy and clover in some dorf or burg—let him be taken out, and, if he cannot be better taught than that, verily, let his brains be beaten out so that his appendicitis-suffering friends may be saved from his "expectant" treatment.

As for the violent régime of the ice-bag and opium treatment of some of the German practitioners for what they are pleased to learnedly designate "perityphlitis" and "paratyphlitis," in contradistinction to what they call by the awful name "Wurmfortsatzentzündung" (appendicitis), we say with Erb that his treatment of perityphlitis or paratyphlitis is rational and good, but that in the majority of cases pure and simple perityphlitis or inflammation around the caput cœci or cœcum is but secondary to the primary purulent trouble in the appendix itself. We grant that operative interference is not called for in the disease paratyphlitis or perityphlitis, but we discredit the frequent existence of that state as either a pathologic or clinical entity. The German profession laugh at what they call the sheer and barbarous use of the knife in "perityphlitis" by American surgeons, and point with pride to their wonderful results with opium and ice: we would respectfully refer the reader for a reply to this Teutonic jeer to the old worn-out saying, "He who laughs last laughs best."

MEDICAL ATTENTION IN PUBLIC PLACES.

It is a matter of fact that knowledge of "first aid to the injured," emergency medicine, comes in good stead in many instances, and that quick thought and prompt action often saves lives that would otherwise be irretrievably lost. Many accidents occur in theaters, in public halls, and in restaurants. In most cases the physician is sure to be conspicuous by his absence, and dire consequences often ensue before he can be summoned. The practice of placing physicians in theaters is largely in vogue in the European cities. In Berlin each theater has an attending physician, who is bound to attend each performance or else send a substitute when he cannot come. By this means much good has been done. And yet, even the presence of the physician in a crowded place such as a theater necessarily must be does not always mean that prompt action can be forthcoming, and for this reason: the physician may be on the spot and all that, but yet he lacks all the accessories which are called for—trained assistants, etc., a suitable room, etc.

A movement has been started in Paris to install in each theater, public hall, circus and large cafe a "medical loge," where there will be an armamentarium complete enough to do all kinds of emergency work, with a trained assistant, operating table, etc. This isn't a bad idea, and might well be followed up in America, where accidents are proportionately more common than in the continental cities. It may not be often of service, but when the occasion *does* arise, it is—like other things—badly needed and hurriedly, too, so that a single case in a year may furnish sufficient excuse for the installation thereof.

Certainly the expense of the venture should not deter a conscientious management in starting it; it only needs the attention of enterprising medical men to "push it along."

PUERPERAL GANGRENE IN THE LOWER EXTREMITIES.

Now that we have almost driven out of existence that dreaded foe of the obstetrician, puerperal fever, we come to the conclusion that the accidents of childbirth have been materially reduced. Yet there are some disorders that will arise in spite of all medical or surgical aid—accidents that come by nature of interference with physiologic function. One of these accidents that we wish to speak of is that form of gangrene which is sometimes seen in the puerperium. It affects the lower extremities and is usually due to a thrombosis of the large femoral artery and secondary clots in the femoral veins. In some cases this pathologic condition is due to pressure of the skull of the child on the iliac artery, combined with a general lowered state of resistance, such as would naturally be expected. In the cases which have been reported—and in the last year or two there have been five—exitus has followed in the majority of cases. At necropsy it was found in one case, reported by Duflocq, that there was a gangrene of the right foot, slight thickening of the mitral valve of the heart, clots in

the femoral artery and vein. The popliteal artery showed microscopically signs of endarteritis. This gangrene set in four weeks after delivery. The pressure of the head could possibly be the only cause of the condition, as the thickening of the mitralis would hardly furnish a focus from which the embolus started. In other cases, particularly in one reported by Heymann, merely embolic changes were found in the vein muscles of the right leg, with no affection of the large veins. A strange case of this kind is reported by Wormser in the *Centralblatt fuer Gynecologie*, January 26th, in which there was a symmetrical gangrene of both feet in a woman with vitium cordis, four weeks after pregnancy. Amputation was performed with good after-results.

It should be remarked that in most of the cases cited death followed and surgical intervention was futile. This impresses one with the gravity of the complication. By nature of its pathology it can hardly be expected to be amenable to treatment.

DIABETES IN CHILDREN.

At the last meeting of the American Medical Association a discussion in the section for diseases of children occurred on the subject of diabetes mellitus in children. The discussion seems to take the ground that the affection is more common in children than is generally supposed. Some statistics were quoted in which it was shown that out of eighteen hundred and sixty-seven deaths from this disease in New York City, 4.25 per cent. represented the mortality of children with this disease. It seems to us that this is rather an uncommon disease, in spite of the statistics quoted, and in spite of the conclusions of the speaker on the subject, who says that "diabetes occurs in children much more frequently than is generally supposed." Moreover, we think that the speaker does the general profession an injustice when he says that examination of urine should be practiced much more frequently than is the custom. It is our observation that urinalysis is very conscientiously performed by the majority of the practicing profession.

Another point that we wish to take exception to in this paper is the fact that another "conclusion" states that there may possibly be an etiology relationship between diabetes mellitus and peliosis rheumatica. It seems perfectly absurd that one should think of such a state of affairs, knowing what we do of diabetes mellitus and also of morbus maculosus Werlhofii. It is a decided fact that peliosis rheumatica is a general affection attended with blood changes in many organs, that it has no special relationship to pancreatic or cerebral disturbances, and that, so far as etiology is concerned, we are not warranted in making any conjecture concerning it. As for diabetes mellitus, the weight of opinion nowadays is veering towards pancreatic changes, and the theory of cerebral disturbance is losing ground. It is of course possible to reconcile all this with the fact that temporary glycosuria, not diabetes mellitus, if you please, is

often due to brain disturbances consisting of increase in intracranial pressure. It is distinctly stated by Henoch in his masterful work on pediatrics that peliosis rheumatica is often accompanied by stomach and intestinal disturbances, often by perforation, but nothing is said of sugar being found in the urine. The fact that purpura existed in one case described by the writer of the above paper is poor ground for jumping at the hasty conclusion that there is a relationship between diabetes mellitus and purpura hemorrhagica. Haste makes waste, especially in the too early sounding of pathologic dicta by those who generalize from specialties.

A NEW METHOD OF SUTURING THE ABDOMINAL WALL.

A new method of suture of the abdominal wall appeals forcibly to us as being a practicable innovation, and so we quote it. It has been devised by Juvara, and consists essentially of the following procedure in cases of hernia: the fascia of the recti muscles on both sides are dissected free for a distance of 2 or 3 cm. Then a long thin needle is thrust through the rectus and the peritoneum, from within outwards, then thrust through the rectus of the other side 4 to 5 cm. from the margin of the wound, and is further continued to the other side. Each suture is cut, making a line of divided sutures. These sutures are then tied. Then the fasciæ are sutured and tied, after which the fat layer is so sutured that it is attached to the fascial layer. The skin is sutured last of all. The method is very good and excellent results have been obtained with it.

POST-DIPHTHERITIC PARALYSES.

It is noteworthy that we see more cases of post-diphtheritic paralysis nowadays, with the antitoxin treatment, than clinicians twenty years ago and more were accustomed to see. At first sight some would be inclined to think that the antitoxin treatment is producing this state of affairs, but with a little logical afterthought the whole situation can be taken in. It is a fact that the antitoxin treatment of diphtheria has wonderfully lowered the mortality of that disease, and that very few cases of diphtheria properly and speedily treated with antitoxin go to dissolution. There are some cases in which a diphtheria bacillus of unusual virulence is working its havoc, and it is in this kind of a case that the toxin of the bacillus at work produces such an effect on the central nervous system, before the antitoxin can be brought into use, that paralysis of some kind or another will be sure to follow. Before the days of antitoxin therapy these severely virulent cases would quickly die, so that cases of paralysis would not be seen. Now we save the life of the child, but cannot prevent the production of the paralysis for the reason stated. This explains why we see so many cases of post-diphtheritic paralysis, as compared to the state of affairs in pre-antitoxic days.

Now that we have these cases of post-diphtheritic paralysis, the question arises, what shall we do for them? We have seen most excellent re-

sults in the treatment of these paralyses in Germany with the hypodermatic injection of strychnine nitrate. The injections are performed daily, beginning with five milligrams of the strychnine nitrate, and gradually increasing the dose. It certainly has a decided ameliorative effect, and will warrant conscientious trial on the part of pediatricists, whose lot it is to come in contact with these cases. Persistent trials should be made, and results will surely be forthcoming to those who are assiduous in their attempts.

THE UBIQUITOUS PNEUMOCOCCUS OF FRAENKEL.

It is one of the most curious things in the world to observe the ubiquitous behavior of the specific cause of acute lobar pneumonia, namely, the diplococcus pneumoniae of Fraenkel. It is well known that this organism is found in the saliva of most healthy individuals, and that it in no way differs from the same organism which is found in the lungs and rusty sputa of pneumonia patients. The writer undertook an investigation some time ago in search of the pneumococcus in healthy lungs, and found it post-mortem in quite a number of lungs which gave absolutely no signs of lobar pneumonia. In a description of this search, he laid emphasis on the fact that the diplococcus pneumoniae is an organism which is only capable of provoking an attack of pneumonia with the help of local and general assistance on the part of the human organism (INTERSTATE MED. JOUR., March, 1900).

The finding above alluded to is not the only peculiarity of this micro-organism. One of its most curious characteristics is its capability of being carried to some other part of the body after an attack of lobar pneumonia and there setting up some disorder, sometimes merely inflammation, sometimes suppuration. A curious case of this kind was studied by the writer last year; the case occurred in the practice of Dr. John Green. The patient, after passing through an attack of lobar pneumonia, became affected with an ophthalmia. This ophthalmia persisted, and later there developed in both eyes a symblepharon, or gluing together of the eyelids. The writer made cultures from the lids in this case and found the pneumococcus, succeeding in producing characteristics effected also by animal inoculations. The case was plainly one in which the original *causa belli*, the diplococcus pneumoniae, was carried from the lung to the eye. How this occurred it is impossible to say. It might have been due to the patient's rubbing some of his infectious sputum into his eye, or it may have occurred through the blood stream. There are other cases in medical literature which show this characteristic of this organism, this tendency to be suddenly caught up and swept to some remote part of the body, there to work havoc. Samter described a case wherein multiple abscesses due to the pneumococcus followed after an attack of pneumonia. Pearce describes seven cases of abscess formation due to the pneumococcus after an attack of lobar pneumonia. The latest case is one reported by Roeger in *Muenchener med. Wochenschrift*, where a metapneumonic abscess of

the abdominal wall occurred three months after an attack of pneumonia, after a sternal abscess due to the same agent. In none of these cases was it definitely proved that the pneumococcus was floating free in the blood stream. Just how the infective process localizes itself in this way is not known, so far as blood cultures will show. A case which will throw a great deal of light on the subject of how this metastatic process occurred was seen by the writer in the medical service of Prof. A. Fraenkel at the medical clinic at Urban Krankenhaus, Berlin. For six months after an attack of acute lobar pneumonia a patient at that institution struggled with an attack of general septicemia. In his blood were constantly found pneumococci. The case was of particular interest as it occurred in the clinic of the man who discovered the organism, and so was carefully watched. The patient finally died and showed general changes of septicopyemia with endocarditis maligna. This case goes to prove that the pneumococcus can be set free in the blood stream after an attack of lobar pneumonia and can cause septicemia, pyemia or even one remote abscess. Further investigation will probably more fully develop this idea, which has been proved by but one case in practice.

THE LOWERED BIRTH-RATE IN FRANCE.

It is an acknowledged fact, according to the best statisticians of France, that the birth-rate in that country is being steadily lowered year by year. This condition of affairs has been prevailing for some time, and has time and again been brought to the attention of the French government, in the hope that some means may be devised for remedying the evil which, in the opinion of the members of the Chamber of Deputies, threatens to depopulate France and give their arch enemies (who are legion) a chance to invade and occupy "la belle France," in much the same way that the hated Prussians invaded Lorraine in the seventies.

An explanation of this lowered birth-rate, according to the French authorities, is the practice of young girls being compelled to have a "dot" or dowry before they will be accepted by marriageable young men. Consequently, the girls without "dôts" are compelled to live a life of single blessedness; and, furthermore, children become *aves rarissimae* in France. Of course, this is a good explanation in part, but it does not explain all. It is well known that the same rules governing marriages exist in Germany, where the dowry is a most important consideration, yet who would have the "killing gall" to hint at the absurdity of lack of fecundity in the dominions of Kaiser Wilhelm II.? The explanation for the state of affairs in France might well be explained by the practice of so many French people of indulging in perverted methods of sexual intercourse. It is well known, for instance, that a large part of the population of Paris are sexual perverts of the worst type. This applies not only to the demi-mondaine and their following, but also to the married community. In the face of such a condition, it is but natural to understand that the birth-rate would

be lowered. If measures are to be taken looking toward an increase in fecundity in France, possibly it would not be half so bad to establish "missions" for the reformation of the habits of the French. If their perversions could simply be turned in the right and proper direction, with their erotic tendencies, the tasks of the accoucheurs would speedily be redoubled and a generation of French would spring up that in point of numbers, at least, could easily cope with the legions of Germany or of England, which poor, suspicious France is ever seeking to vanquish, in theory if not practice.

THE ETIOLOGY OF PURPURA HEMORRHAGICA.

The disease purpura hemorrhagica, morbus maculosus Werlhofii or peliosis, as it is variously named, seems as far now from a solution, from an etiologic point of view, as it was decades ago, when its pathology was carefully studied by Virchow. Since Virchow described its pathology not much advance has been made.

It is a disease which is attended with changes in the blood-producing organs, and in the circulatory system. Of particular note—an observation that is frequently made—is the narrowness of the aorta. This was originally pointed out by Virchow. It still continues to be seen in connection with obduction work with purpura.

Many investigators have looked for a bacilliary cause for the disease. Staphylococci, streptococci, diplococci, bacilli of various forms and shapes have been found in the disease, but their identification as causative factors has not as yet been tacked to the disease.

The el dorado for bacteriologic workers has heretofore been the finding of a bacillus purpuræ. The one who seems to have approached nearest to this golden land is Kolb, who over ten years ago found a bacillus constantly in quite a number of cases of purpura, and thought it was the specific micro-organism for the disease.

In one fulminant case Kolb searched for the bacillus in the flowing blood during life, but could not find it, although he found it without difficulty in cultures made after *exitus letalis*. This bacillus grows on all the ordinary culture media and stains readily by the Kühne method with methylene blue. It was also pathogenic for animals. The animals which can be infected with it are mice, rabbits, and dogs, while guinea-pigs and pigeons are immune.

These animals become sick and show typical signs of purpura. After death they show hemorrhages into the body cavities and yield the bacillus with which they were infected. By filtration of cultures of this bacillus Kolb established the fact that he could also obtain similar effects with a toxin as well as with injections of the bacillus itself. Unfortunately, no confirmatory work has been done with this bacillus purpuræ of Kolb. It has slipped into the background. It gave promise of much but has yielded

naught. Search is still being made for bacteria in all observed cases of this disease, and possibly Kolb's observations will yet be confirmed.

A NEW TEST FOR SUGAR.

While it is true that we have a variety of tests for sugar in the urine, still we say, with all ardor, "the more the merrier." It is quite satisfactory to accept the fermentation or the phenylhydrazin test for sugar as reliable agents, but we cannot say the same for the other tests commonly used in the clinical laboratory. A new test which has been tried very conscientiously by Gebhardt at the Medical Clinic of the University of Ofen-Pest is that called the "nitropropiol test for sugar." In combination with sugar, nitropropiol forms first a green color, and then an indigo blue, due to the formation of indigo. The reduction of orthonitrophenylpropiol with dextrose was first pointed out by A. Baeyer in 1880. The firm Köln-Ehrenfelder Fabrik Teusch make a tablet of nitropropiol with sodium carbonate for use as a sugar test. The test is made by dissolving one of these tablets in ten ccm. distilled water, adding ten drops of urine, and then slowly heating the solution for three or four minutes in a test-tube, whereupon, if sugar be present, we get a blue-colored fluid; and, when the fluid is allowed to stand, we see plainly a deposit of indigo at the bottom of the tube. If the blue color is not distinct, then it is recommended to shake a little chloroform with the mixture. The chloroform absorbs the indigo, sinks to the bottom of the tube by reason of its greater specific gravity, and we see it as a blue colored mass of fluid below.

It is positive that this reaction obtains only in the presence of sugar. Furthermore, it gives no reaction with bile, with albumin, blood, albumins or pus. The reaction is not hindered by the presence of a small amount of albumins, but where it exists in large quantity then it is better to remove the excess of albumins by shaking with salt solution and chloroform and filtration. Again, patients who are taking different medicaments do not show this test with these medicaments which are excreted in the urine: for instance, benzoic acid, chloralhydrate, guaiacol, iodine, rhubarb, salicylic acid, senna, and turpentine. Kreatinin and glycolic acid do not give the reaction. The test is extremely delicate, showing sugar in 0.03 per cent. solutions; solutions of 0.025 gms. sugar in 100 gms. water showed only the green color.

This test is of decided utility and should speedily come into general use. It is delicate and has no drawbacks. The tablets used for making the test are very cheap—in Germany. They are sold in packets of twenty-five tablets for about fifteen cents. It is easily performed, requires no waiting and no complicated apparatus, and so should appeal forcibly to the general worker. So far no substances have been found besides sugar that will reduce nitropropiol in urine.

ORIGINAL ARTICLES.

A CASE OF CHOLEDOCHOTOMY FOR THE REMOVAL OF IMPACTED STONES.

BY HOWARD LILIENTHAL, M. D., of New York City, New York,
Attending Surgeon Mt. Sinai Hospital, New York.

THE subject for operation this afternoon is a woman, thirty-five years old, who was admitted to the hospital five days ago, suffering from disturbance of the gall-passages, which caused, as you see, a general jaundice. She has told us that six years ago, after child-birth, there was a similar attack, accompanied by jaundice. This resulted in recovery, and she has been well until three months ago, when aching pain in the epigastrium, shooting through to the back, appeared. The pain is not constant, but disappears for a day or two and then returns for a similar period of time, gradually subsiding. There has been no actual colic or vomiting, but much distress after eating. Cathartics have relieved the constipation. The urine contains bile, but the stools are not distinctly clay-colored. The jaundice, indeed, has not been permanent during this period of six months, but has recurred with each successive attack. As you may observe, she is poorly nourished, as might be expected from the loss of appetite which has been a feature of her recent trouble. There has been some fever, the temperature just before this anæsthesia being 101° . Under unæsthesia, as you will note, the liver can be easily palpated, and it extends about two fingers' breadth below the free border of the ribs in the mammary line, thence horizontally until it meets the border of the ribs on the opposite side.

On account of the slight dullness and diminished breathing over both apices, I have selected chloroform as the anæsthetic of choice in this case. I note that both recti above the umbilicus are considerably contracted and firm, so that a deep anæsthesia is necessary to relax them and permit of satisfactory palpation.

The epigastric pain, with the accompanying boring pain in the back, together with the fever, jaundice, and the distinct history of remissions, lead to the diagnosis of common duct obstruction, which, at times, seems to be partially relieved. One important symptom of biliary pain is lacking here: I refer to the well-known shooting sensation in the right shoulder. However, we are fully justified, from the picture presented, in performing this exploratory operation, with the strongest probability that we shall find and remove the cause of the disturbance.

I will make my incision a curved one in its upper portion rudely parallel to the free border of the ribs for two inches, and thence carried down in a straight line over the outer border of the right rectus muscle for about two inches further. On reaching the muscular fibers of the rectus a blunt retractor is hooked into the border of the muscle and it is drawn strongly toward the median line. The incision through the posterior structures is made, as it were, behind this muscle. If it is necessary to enlarge the incision downward, the muscle need not be cut; but if the wound must be enlarged upwards, a transverse division of a portion of the upper part of the rectus muscle will give us plenty of room, and the resulting cicatrix will be a firm one, hernia in this region being almost unknown. Upon palpation with my right hand within the abdominal cavity I can distinctly feel the gall-bladder, and, if you will look into the wound, you will find that the viscus is brought easily into view. Its walls are thickened, but it is quite evident that it contains no stones, and that the thickening is due to the hypertrophy, on account of the extra strain from the habitual overcoming of unnatural resistance in the ducts. The cystic duct is also empty. On passing my left index finger along the gall-bladder and cystic duct through the foramen of Winslow, I can feel a hard tumor, apparently in the common duct, about one-half an inch from the duodenum. The mass is about as large as a pigeon's egg. It is very important in working in this region that one should not be hampered for want of room. I will, accordingly, enlarge the incision in its transverse portion, when, as you see, the semicircular flap, on retraction, gives an excellent exposure, permitting accurate manipulation with the aid of sight. Because on incising the duct we may expect bile more or less infecting to flow, it becomes imperative to pack away the viscera with the aid of gauze, as a precaution against contamination.

Just here I beg to call attention to the method of using these packings. We do not count the pieces of gauze; we do not use sponges; we do not use gauze-packs with strings attached; but we use long, thick, folded pieces of gauze, and not more than one-third of the packing is ever placed within the abdominal cavity, the other two-thirds being outside in plain sight. This simple method, though somewhat wasteful of gauze, is an absolute safeguard against the accidental leaving of pieces of gauze in the abdomen to make serious subsequent trouble and perhaps even cause the death of the patient. I have now placed the packings carefully, so that only the part which is to be operated upon is exposed. With the fingers of the left hand behind the tumor I push the mass forward, and while my assistant raises the omental tissue in front of it between two forceps I carefully dissect down through this tissue until the tumor is in view. I now feel that this tumor is almost certain to prove to be a stone, or perhaps several stones, in the common duct. While the tumor is still pushed forward by the fingers of my left hand I will encircle an area about two-thirds of an inch in diameter with a silk purse-string suture, put in with a

hemostatic needle. The walls of the duct are very much thickened and very tough, so that they lend themselves nicely to this mode of treatment. The sutures are now in place, and while my assistant raises the encircled area of the duct-wall between two mouse-tooth forceps an incision with the knife is made into its lumen. There is quite a little gush of bile, and, from the fact that one small facettted stone is extruded, we may be sure that there must be others present. With a spoon I am easily enabled to remove this tumor, which turns out to consist of eight or nine small facettted stones. On exploring the duct in the neighborhood I am able to withdraw ten or twelve other stones, which apparently did not form a portion of the tumor, but were lying, as it were, loose in the common duct behind the impacted mass. There is a very profuse and free flow of bile; so, having succeeded in our operation, we will tie the purse-string suture after tightening it carefully. My assistant during this procedure is inverting the edges so that the peritoneal surfaces may be in contact when the suture is tied. Nevertheless, I have placed a few extra silk sutures in the walls of the duct in order to secure the purse-string.

The operation is now finished. A long drain of gutta-percha tissue with a central core of gauze is inserted down to the wound in the duct and all the other packings are removed. I feel quite safe in doing this, as there is not a particle of leakage at present, and I see no reason why, in such tough tissue as the walls of this duct, we should fear the cutting out of the sutures. Therefore, with the exception of this drain, we will close the abdominal wound with through-and-through sutures of silk-worm gut and apply a dressing of dry gauze.

FINAL REPORT.—Twenty-nine days after the operation the patient was discharged from the hospital in excellent general condition, her wound entirely healed. Her convalescence was characterized by but one complication, namely: a post-operative nephritis accompanied by vomiting; which was treated with stimulants, diuretics, and the daily administration of fifteen grains of urotropin. Five days after the operation the drain was removed and the wound repacked with small strips of gauze, which were laid in through a urethral endoscope. Eight days following the operation the sutures were removed, the wound being primarily healed, with the exception of the drain-opening.

Dr. Edward Wallace Lee, formerly professor of surgery, Creighton Medical College, has located in the Linmar building, St. Louis. Dr. Lee was chief surgeon of Douglass County Hospital, also St. Joseph's Hospital, of Omaha, and Surgeon of C. B. & Q. Railroad. Dr. Lee will devote himself exclusively to surgery.

ANCHYLOSTOMIASIS.¹

BY J. H. DYER, M. D., of St. Louis, Missouri.

ANCHYLOSTOMIASIS is a disease of infrequent occurrence in this country; consequently, very few cases are reported. So infrequent, indeed, is this disease that some of you may be inclined to doubt the correctness of our (Dr. Glosemeyer's and my own) diagnosis of the case I am going to report to this society. This infrequency makes it the more important, in my opinion, to narrate this case of ours, which shows that such cases do occur, and which should keep us on the alert in those cases presenting a varied and quite infrequent symptomatology. The anchylostomum duodenale, also known by several other names, is the only strongyle harmful to man, and belongs to the same family as the sclerostomum equinus, said to produce a verminous aneurism in the horse. It inhabits, as its name would indicate, the upper portion of the small intestine—the duodenum and jejunum. The parasite is from one-half to three-fourths of an inch long, and somewhat thicker than the seat-worm, which, of course, you all have seen many times. The female is larger than the male. The mouth of the a. duodenale has from six to eight tooth-like hooks, by means of which the parasite attaches itself to the mucous membrane of the intestine. The number of a. found in the intestine may be inconsiderable, but as a rule are, and in our case were, very numerous. Authorities claim that the female is more abundant than the male. The development of their ova takes place outside of the human body in water, and there the embryo leads for a time an independent existence until, gaining entrance to the stomach and bowels of man, it there undergoes complete development. 'Tis said that the female abstracts more blood than the male, the authority of this statement being made from the fact that the female is of a darker brown under the lenses of the microscope. Symptomatology of anchylostomiasis is due to the irritation of the parasite in the earlier stages and to the slow depletion of blood in the later stages, and is therefore practically the same as that of progressive anæmia, *plus* dyspeptic symptoms. The severity of the symptoms as well as the gravity of the prognosis of the case, of course, depends to a great extent on the number of parasites present, and on the duration of the case before a correct diagnosis is made and proper treatment instituted. For a long time the symptoms are indefinite, and often lead one to treat the alimentary, or, rather, digestive tract for functional disturbances, owing to the various gastro-intestinal manifestations, such as heaviness or pain in the epigastric or umbilical regions, loss of appetite, vomiting, and alternating constipation and diarrhœa. Sooner or later, depending, as afore-said, largely on the number of a. present, the evidences of anæmia make their appearance. Palpitation of the heart, dyspnœa, vertigo, syn-

¹ Read before the St. Louis Academy of Medical and Surgical Sciences.

copal attacks and tinnitus aurium are complained of by the patient, and lead an unsuspecting physician to think his patient's gastro-intestinal ailment is of an hysterical origin. However, the patient grows more and more pallid, copious sweats add to his weakness, and there may be, and there was in our case, a slight elevation of the evening temperature. The pulse becomes rapid and at times irregular, and later on anæmic murmurs are heard over the heart and large vessels. The blood is, as in pernicious anæmia, pale and watery, deficient in hæmoglobin, and the red blood corpuscles are greatly reduced in number. The stools are of a brownish or blackish color, and at times distinctly hæmorrhagic.

Such was the case in our patient, and this led us, after consulting together, to make a microscopic examination of the fæces and consequent absolute and positive diagnosis of anchylostomiasis by the finding of their ova, further confirmed by the immediate improvement of our patient on our change to the specific treatment for that malady. According to the best authorities on the subject, the patient in the final stages becomes apathetic and dropsical. The serous cavities fill with fluid, producing urgent dyspnœa and ascites; there may be hæmoptysis, albuminuria and severe nervous disturbances. I cannot vouch for all these symptoms, as our patient did not reach that stage of the disease ere we recognized the true nature of it and began proper treatment, with, as before stated, surprisingly excellent results. Our patient was very nervous, however, so much so that insomnia ensued. Patient's weight was reduced from one hundred and eighty-three to one hundred and twenty-five pounds, making a loss of fifty-eight pounds in less than three months. The disease may assume an acute course, terminating fatally in a few weeks' time; and for this reason I would advise a thorough microscopic examination of the fæces in patients suffering from a progressive anæmia, as an early diagnosis only may be the means of saving the patient's life, as that will lead us to institute proper treatment. The usual course is, however, of several months' duration. Spontaneous recovery never occurs, and a fatal termination inevitably results unless the condition is recognized in time and properly treated. Anchylostomiasis must be distinguished from idiopathic pernicious anæmia; and the only means of so doing is by a microscopic examination of the fæces for the presence or absence of the ova of the *a. duodenale*. A failure to differentiate, I presume, may have been the cause of physicians losing patients thought to be suffering from idiopathic anæmia only, and consequent treatment with ferruginous tonics without removing the cause. In places where the disease is prevalent, of course prophylaxis is of great importance. The drinking water should be boiled and thorough cleanliness observed. After once recognizing the disease, the treatment is simple. Thymol is a specific. The patient should undergo the same preparatory treatment as for tape-worm, and the remedy given in large doses, followed by purgatives. The same treatment may be repeated after a

week, if found necessary. After the destruction of the parasites, ferruginous and other tonics are, of course, indicated.

REPORT OF CASE.

This case of ours occurred in a lady about forty-five years of age. The symptoms were as follows: Weakness, particularly noticeable on the least exertion; a feeling of heaviness, amounting to pain at times, in the region of the stomach; eructation of gases; palpitation of heart; constipation, alternating with attacks of diarrhœa. Later on, patient became very anæmic; anæmic murmurs were plainly heard over the base of the heart; copious sweats, at night especially, occurred, and there was an elevation of the temperature to 100 and 100.5 degrees in the evenings. Patient was very nervous, causing more or less insomnia. The stools were very dark, and more or less distinctly hæmorrhagic. Patient, when she first came under our observation, had lost about twenty-five pounds. We instituted treatment for the dyspeptic symptoms, and gave in conjunction with those remedies the usual drugs for the nervousness. Our patient, under this form of treatment, continued to grow worse and weaker and lose flesh, until she had lost fifty-eight pounds, when we decided to make an examination of the fæces for parasites or their ova, which were found to be very numerous. A microscopical examination of the blood was also made, which revealed nothing dissimilar from the blood as found in idiopathic pernicious anæmia, which all of you have had occasion to treat. The treatment which I have already narrated in my paper was instituted with the most gratifying result. Patient in two months regained her former weight, and is now in perfect health.

Koplik's pre-eruptive buccal sign of measles was present in one hundred and sixty-nine out of one hundred and eighty-seven cases in the New York Foundling Hospital during the past year. These whitish spots appear on the mucous membrane one or two days prior to the general eruption, and are valuable aids in diagnosis, as they are not known to be present in any other disease.

Vaccination is preferably performed on the arm, over the insertion of the deltoid. If the leg be elected, the site should be at the junction of the middle and lower thirds of the outer side of the thigh. The hands of the operator and the field of operation should be thoroughly scrubbed with brush, soap and water. A little alcohol may be applied and allowed to evaporate. The scarified area should not exceed three-eighths of an inch in diameter, and should not be deep enough to cause much exudation of blood. Glycerinized virus is preferred. It should be thoroughly rubbed in and dried in the air. No dressing is necessary.

THE DOCTRESSES OF MEDICINE.¹

By T. C. MINOR, M. D., of Cincinnati, Ohio.

DR. MELANIE LIPINSKA, whose portrait appears herewith, is the authoress of "*Histoire des femmes medecins*;" and, as her work is very interesting from a medico-historical standpoint, we venture the publication of a few extracts.

The number of female physicians is increasing. During the year 1899-1900 the Paris school alone counted twenty-nine French women inscribed, and also one hundred female medical students from other portions of the globe. Is this right? Is it a misfortune? Let some more competent judge decide the question.

Feminism in these militant days is not a new condition. It is as old as our planet. There were female physicians in the time of Hippocrates, and the mother of Socrates was a sort of doctress, according to the words of her son that have been transmitted to us by Plato. The mother of Socrates said: "*Always deliver a woman who has difficult labors and facilitate abortion when the mother of the infant so decides.*" We need not be astonished at this. The ancients had altogether different ideas of abortion from ours. A contemporary of Augustus Hyginus, the grammarian, tells us that even antique Greece saw difficulties arise between the physicians of the two sexes. He reports the legend of Agnodice, the first female physician of Athens. The recital of Hyginus may be considered as fabulous, yet it is possible, for the legend is ever the truth concentrated or transfigured; and it is very probable that in a few centuries hence the history of the first female physician of the nineteenth century, Madame Madeline Bres, will enter in future narrations as a mere legend, too.

The adventures of Agnodice are a gracious symbol. Before her day the Athenian law interdicted slaves and women from the practice of medicine. It likewise happened that many women whose modesty prevented them from ever consulting male physicians died from lack of medical attention. Then a beautiful young girl, Agnodice, resolved to aid her own sex. So she cut off her fair locks, assumed the costume and airs of a man, and followed the medical teachings of Hierophilus. Her education being finished, whenever she heard that a woman was attacked by a malady of the fair sex she went promptly to the aid of the sufferer, and if the patient took her for a man, she made herself known as a woman. This plan attracted a great practice, and the Greek doctors, getting wind of the affair, accused Agnodice; and she was brought before the areopagus, or magistrate, on the charge of corruption. The magistrate was on the point of sentencing her, when Agnodice openly declared her sex. Did she do this in the same manner as the lovely Phryne? We do not know, but hope, for the sake of modern doctresses, she did not. Yet her jealous

¹ Translated from the French.

male adversaries cried out that the law had been violated. But the Athenian women had influence then, just as woman ever has had, and intervened in favor of Agnodice, for had she not saved their lives? So wise Grecian legislators revised the law that barred women from practicing medicine, at least, and the field was open to the fair sex.

As we said at the beginning, a doctress, Miss Melanie Lipinska, has written a large volume on the history of female physicians from days of antiquity to the present time. She fully shows by strong documentary evidence that the woman doctor has existed in all times and in every land. Indeed, she proves that it has only been in later days that women have been restricted in their rights to practice the healing art. It is true then that it was only in the middle of the nineteenth century that women reconquered and resecured what was their ancient right.

The first French woman to secure a diploma, that of surgeon, used



MELANIE LIPINSKA.

the same subterfuge as that of the fair Athenian, Agnodice: by simulating masculinity. Besides, the authenticated adventures of this French doctress are much more romantic than those of the Grecian lady.

Henrietta Faber was the widow of a French officer killed at Wagram. Like many women of her day, she was occupied with surgery and the care of wounded soldiers. Widowed, she assumed man's costume and passed for a male, under the name of Henry Faber; thus she underwent her military examination in medicine. She remained as an acting surgeon in the "*grande armée*" up to the time of the war with Spain, when she was made prisoner. She remained in Spain until peace was declared and then departed for the Island of Cuba in 1818 as an official Spanish surgeon. One day she heard a man say as she passed, "That's a woman!" Greatly disturbed, and fearing to lose her means of making a living, she proposed to her maid to wed her for a recompense. This servant, who knew the surgeon's true sex, agreed to the unique proposal, but soon after betrayed

the secret in her idle chatter. Henriëtta Faber was arrested, tried, and condemned for *sacrilege*; the sentence being ten years' confinement. In 1825 she was sent to Florida; there she resumed the practice of surgery again, made a fortune and finally died as a sister of charity at Vera Cruz.

If among primitive peoples female curers abounded, there were also many female physicians in Rome. Recent archæological discoveries have permitted moderns to rewrite the lives of these *medicæ*. But we need not follow Miss Lipinska through all this interesting historical matter bearing on women doctors. We leave to some gentle American *confrere* the task of a fuller translation of this very charming subject.

Let us remark in passing, however, that modern feminism recruits the greater number of its adepts among peoples of Anglo-Saxon and Germanic origin. We know that France furnishes but very few doctresses. The militants of international feminism gloat over the lukewarmness of their more modest French sisters. Our faculties count a minimum of French ladies, if compared with foreign female medical students. Now, the character of races changes but little. Germanic antiquity was ever feminist. We may even state that during a larger part of the "middle ages" the German women were far better educated than the men. Even at the present day, in the United States, the women are mostly superior in point of cultivation to the men. Yet France, during the "middle ages," had some very magnificent women when it came to intellectuality.

In the "middle ages" universities were rare in Europe; men acquired medical education by following some talented master, and, after some years of such experience, were admitted to the ranks of *master surgeons*. The archives of Marseilles reveal the case of one of these master surgeons who turned out to be a woman. We read that Sarah Gilles took, on August 28, 1326, one Signor Salret as a student. She contracted to lodge, feed and teach him medicine and physic for the space of seven months, on condition that the student, if he left her during that time, must repay his mistress for the benefits he had already received. When the "*faculty of medicine*" came into power it declared war against all female physicians. In 1220, an edict was promulgated that forbade any one practicing medicine who did not belong to the regular faculty, and, following the usual rules and customs under such circumstances, *only men were admitted to practice*. But this edict remained a dead letter, for public documents frequently refer to women physicians who practiced in France—at perfect liberty, too. In the year 1292 there were eight female physicians in Paris, whose names and address have been transmitted to posterity. In proportion to population then there were more doctresses in Paris than there are at the present day; for the register of 1900 shows eighty-seven women duly authorized to practice medicine in Paris. During the "middle age" there were female surgeons in France, which fact is proven by documentary evidence, an edict issued in 1311 forbidding female surgeons

from practicing in the city of Paris, unless they had passed an examination before a competent jury.

In the sixteenth century the medical faculties manœuvred so well that no women were found practicing medicine in France. But at that same time women physicians were reaping a rich harvest in Italy and in Spain, where the brilliant Oliva Sabneo wrote so well. The seventeenth century represents the complete decadence of feminine instruction in France. That was an anti-feminist age. It was the genial and yet satirical Moliere who wrote and expressed the unanimous male opinion at that epoch, when he demanded:

*"Ine la capacite de sou esprit se hausse,
A connoître un pourpoint d'avec un haut de chausse."*

At the end of this century some medical works written by women appeared, but it was only the eighteenth century that developed such great female writers as Miss Biheron and Madams Arconville and Necker; but these women were savants rather than medical practitioners. Under the Revolution, that saw the rise of so many absurdities, Madam Tallier demanded from the "convention" that all young girls should submit to an obligatory term of service in hospitals, "there to nurse and treat by the sweetest cares and consolations the sick poor," as the beautiful Theresa puts it, in all the pathos of the times.

It was the French Revolution that fully inaugurated the feminist movement of to-day, putting it in full activity. It burned fiercely throughout the first half of the nineteenth century, and the second half of the same century witnessed the full realization of advanced feminism. It will probably die out again by the twenty-first century; for history ever repeats itself.

The first woman to honestly acquire the degree of doctor of medicine was an American, Elizabeth Blackwell. In 1844 she demanded admission as a medical student of the Philadelphia faculty. Repulsed, she asked admission from every faculty in the United States. The demand was rejected by almost every faculty, but finally the faculty of Geneva Medical College, State of New York, decided to submit the question to their medical students. Now, your male American student is the most chivalric type the world over, whether in New York, Paris or London. These American medical students seriously examined the proposition, put the question to a vote, carried it by a majority, and their proceedings were duly ratified by the Geneva faculty. It was thus the real first female medical student of our age made her *debut*. Young America set the example for old Europe. Meantime, human nature was excited by Elizabeth Blackwell. Her title as student led her to undergo a thousand and one discomforts in the city of her residence. Hotel-keepers for a long time refused to receive her as a guest, under the pretext that her presence would injure their wholesale boarding-house business. When she passed along

the streets the shop-keepers would run to their front doors to see the "*she*" medical student. When Elizabeth Blackwell obtained her diploma she went to Paris, where she experienced the greatest difficulty in securing admission to the lectures. Then the physician-in-chief to one of the great Berlin hospitals wrote her to come to him; that his hospital would open its doors for the fair American. Meantime, a new stroke of diplomacy had been driven by American women; for, on December 12, 1850, the Philadelphia College for Women Physicians opened its doors. This college must not be confounded with the numerous pseudo-colleges that abound in the United States, and grant cheap, ready-made diplomas in all manner of *pathies* to aspiring female medical students. An American woman coming from the Philadelphia school may be regarded as competent; those from other schools are always failures—women with medical aspirations and no brains. So Philadelphia became, not without numerous struggles, the center of the world's feminine medicine. Then came many distinguished women who won diplomas by hard and earnest work—such female physicians (may their tribe increase!) as Amandibai Toshee and Garubai Karmanki, from India; Kei-o-Kami, from Japan; Sabat M. Isleboaly, from Syria; Hu King Eng, from China, and other distinguished Oriental female physicians. In 1900 there were more than three thousand female physicians in the United States; probably fifty per cent. out of these were incompetents from the average low-grade medical schools that are as thick as the leaves in Vallambrosa in that free, exceedingly free and easy, republic.

In Europe it was the Russian woman that overran the medical schools. Russian girls of the nihilist class love to dabble in medicine. So Russia had an intense attack of feminism. In fact, when Russian women passed rapidly from the condition of serfdom to a free state, and had a chance for education, they were intoxicated by the spirit of liberty. It was difficult even for the autocratic government to restrain their violence. In 1868, the Medico-Surgical Academy of Saint Petersburg conferred the diploma of doctor on Madam Rondnava, who had been admitted to finish her studies on account of a Cossack scholarship. This corps of Cossacks professed to be Mahometan of a certain tribe, and demanded a female physician to treat their women.

But this exception confirmed the general rule that in Russia closed the door of medical schools to women. About this time a young Russian girl arrived in Switzerland, it was in 1864, where she demanded from the University of Zurich the right to study medicine. There were very long discussions on the subject. It ended by granting the demand, and in a few years Zurich became the hot-bed of Russian female medical students. So much politics entered the study of medicine by female Russians, that in 1873 a ukase was issued by the Czar of all the Russias, enjoining all female Russian medical students to leave Zurich at once. No sooner had they departed than a crowd of English women took their places.

Meantime the example of Zurich had had an immediate imitation, for women were admitted to the study of medicine at Paris. Dean Wurtz, of the Paris faculty, never hesitated: for when, in 1866, Madam Bres, of Nismes, demanded the rules and regulations, they were sent her. In 1868 she presented herself for the degree, but she had been preceded for several months by three strangers: an American, Miss Putnam, probably the brightest woman that ever took up the profession; an English woman, Miss Garrett, and a Russian lady, a Miss Goutcharoff. This was the first feminine year of the Paris school. The appetite for medicine among women developed. Women now wished to join the *externat*; they succeeded in this in 1882. Then, of course, they had to conquer the position of *internat*; this they did in 1884. Finally, they started out to capture the clinical positions; they failed in this in 1886; but it is well to remember that woman is very persevering in all she undertakes. Afterward women aspired to medical teaching. Thus we see Madam Blanche Edward Pilliet replace her dead husband in the chair of physiology at Lariboisiere, while Madam Robineau was named prosector to the school of medicine at Rouen; and Madam Helena Gaborian added the title of doctor of pharmacy to that of doctor of medicine. She was the first woman who ever accomplished what few men have been able to do.

When European and American women start out to study medicine, they think they will succeed in their natal lands—but soon find the terrors of competition at the very outset of their careers. Woman can never tolerate competition from her own sex—that is her very weak point. So it happens that many women who have failed in medicine in Christian lands have found immense success in Mahometan countries. The Mahometan religion will not tolerate a male physician for women. So the woman doctor is ever a success in all the lands where Mahometan ideas prevail. This is why the Arabic physicians know so little as regards gynecology and obstetrics. Such writers as Avicenna, for instance, knew nothing about Arab women or her maladies. In 1887, the Dupuy ministry studied the question of women physicians for countries subject to Islamism, where women live in harems and are not permitted to receive medical treatment from male doctors—in fact, no man, save the eunuch is permitted to visit the harem.

In olden times this question was treated in yet another form by a legislator, a contemporary and agent of Philip the Fair. In a memoir, addressed to Edward III., King of England, in 1300, this legislator, one Pierre de Bois, claims that the crusades have for their purpose the moral conquest of the Orient. What better propaganda than women? He insisted that women must be taught Latin, Greek, Hebrew, Arabic, in order to convince their future clients. Since these same women must also be physicians and surgeons, they must be so highly educated that they would reach the intelligence of Mussulman women—and thus expand and expound, as they expanded, the beauties of Christianity.

This project of Pierre de Bois came to be put into practice within four hundred years. Read the life of Madam Halpin, who, in the eighteenth century, cared for Mahometan women—one should read all this romantic story in Madam Lepinska's work.

To-day Russian and Anglo-Saxon female physicians overrun Asia, many in the guise of missionaries. France even has sent a few doctresses to its African Mahometan territory, and Madam Chellier has had most remarkable success in Algeria.

The feminine oddity is strangely regarded in Paris. Some Parisian doctresses will insist on wearing masculine clothing. Not long since at one of the President's receptions, Madam Carnot set the example of taking a gentleman's arm on going to the lunch table. A young Parisian, a little under the influence of wine, found no one left in the salon but a person he supposed to be another young man. To this young person he gave a sharp slap on the shoulder and exclaimed good-naturedly:

"Eh bien, maintenant, si nous allons pisser."

He did not know he was speaking to a doctress in masculine clothing. But the doctress was up to Parisian snuff and quietly replied, *"Allons!"* Is there too much Gallic salt in this? If so, do not touch the article.

Chronic constipation in infants and children is too often regarded as a condition to be treated by the repeated administration of purgative medicines. The condition may easily result seriously or be productive of ill-health in later life. Of much greater value than medication is the establishment of correct dieting, and especially the establishment of systematic habits in evacuating the bowels. The habit of going to stool regularly may be impressed upon infants and children very early.

• **Suprarenal extract** freshly prepared is a most efficient hemostatic and astringent. Dr. W. H. Bates, of New York, reports that he cures acute conjunctivitis at a single sitting of half an hour by repeatedly instilling the extract until the membrane is blanched, when he washes the surface with an antiseptic. The patient is afterwards instructed to bathe face and hands in a bichloride solution (1-5000), and special precautions are taken against reinfection from pillows, towels and infected individuals. The extract may be used with like efficiency in congestive and inflammatory states of any mucous membrane, being signally effective in rhinitis and hay-fever.

NEW METHODS FOR THE APPLICATION OF OLD PRINCIPLES IN THE TREATMENT OF FRACTURES AND DEFORMITIES OF LIMBS.

BY JAMES G. HUGHES, M. D., Sheboygan, Wisconsin.

IN ALL cases of fracture, to restore and maintain the limb in its normal position, extension and counter-extension between bony prominences, or a flexed segment of the limb, above and below the fracture, must be employed.¹ To this must be added immobilization, when normal position of the limb is accurately secured. In addition to the above principles, the open dressing, in compound fractures, is of primary importance for obvious reasons. Every splint should permit of inspection, bathing, ventilation, etc. There should be no circular constriction of the limb to retard the circulation. The effects of impaired circulation, delayed union, ischemia, stiff joints, and in some cases non-union, can be ascribed to this interference.

It is safe to say that fully one-half the fractures of the leg should be treated by the ambulatory method. Many patients assume the erect position in spite of the warnings of their medical attendant. The patient suffering from a fracture of the leg, or thigh, is asked to assume the recumbent position until nature repairs the solution. The principles governing the treatment of fractures are the same in the erect as in the recumbent position, and can be applied in one case as well as in another; and if these principles are fulfilled, displacement cannot occur in either position.

With a view of embodying the above principles in the treatment of fractures of the arm, and of fractures, deformities and diseases of the leg and hip-joint, the writer has constructed splints for the upper and lower extremities, each embodying the same general principles, so that a description of any one will suffice. The splints consist of inflatable cushions, in combination with adjustable stays, arranged in such a manner that there is no solid contact anywhere on the limb.

Each part of the splint is simply and easily adjusted. The cushions prevent any injury from pressure, and over the ankle they are arranged vertically with interspaces to permit of free circulation while securing extension. The leg or immobilizing cushions may be segmented if desired, but as the bones are not so superficial as at the ankle, and as there is no traction on the cushions, this is not necessary. The hip-cushion grasps the thigh at the angle of the pelvis, and is arranged so that it can be made to follow the angle of the right or left thigh, as desired. The sock grasps the leg at the ankle, with interspaces between its vertical cushions. By means of the adjustable stays, extension and counter-extension is made between these points with turn-screws and key. With solid metallic con-

¹ American Text-Book of Surgery, 1896, p. 287.

nection between these cushions, the degree of separation on which the adjustment depends remains the same, no matter what position is assumed.

Shortening is prevented in fractures of the leg and thigh. Immobilization is secured by the aid of the leg-cushions and clips connecting the stays, and is under full control, deformity being prevented, as well as



Pneumatic Splint with Adjustable Immobilizing Hip-Joint Attachment for Walking. The Adjustable Belt not shown in the illustration.



Pneumatic Splint with Adjustable Belt Suspender Attachment for Walking.

shortening. When the splint is applied, the foot does not come into contact with the foot-plate.

In the ambulatory treatment, when the weight is placed on the foot-plate, it is received by the pelvis, the leg being in a "sling," suspended from the pelvis. A cane should always be carried, but where desired a crutch may be substituted.

The shoe of the opposite foot should be raised, to match the raised

foot. The erect position, with a limited amount of exercise, will tend to preserve the general health, increase the circulation, hasten absorption, and promote growth and repair; this, with the accuracy of adjustment which preceded it, and can be secured by this method, limits the amount of softening and absorption, hastens the time of healing, and avoids the usual muscular atrophy which accompanies fractures owing to disuse of limbs and circular constriction.

Bandaging to assist in retaining the fragments in apposition should pass from the leg or arm to the stays, for better support and to avoid circular constriction.

The suspender attachment supports the weight of the splint from the body, and is adjustable.

The accurate coaptation secured by this method reduces pain, lessens the amount of softening and absorption, and hastens convalescence. By avoiding circular constriction, we limit the amount of exudation; facilitate growth, repair and absorption; avoid ischemia and stiff joints.

Is circular compression adequate to maintain the apposition of the fragments? Experience in fractures of the upper third of the femur has shown that circular compression, no matter how applied, cannot by itself maintain apposition. What is true in the upper third is also true, in a lesser degree, in other places. The beneficial effects of circular constriction with bandage and cast have been overestimated, while its dangers and disadvantages have been too little commented on, if they have been fully appreciated. Open dressings facilitate inspection, dressing, bathing, ventilation, massage, and any indicated treatment, the importance of which needs no emphasis. The attachment for immobilizing the hip-joint is applied in fractures of the neck of the femur, and also used in hip-joint diseases, and is on the same principle as that now in vogue. When the key is removed and the caps replaced, the splint is locked, and the adjustment cannot be interfered with. The pneumatic pads are covered with satin-finished water-proof leather, and can be cleaned with warm water and soap when necessary.

The splints are easily worn under the regular clothing, and are so well constructed that they will last practically a lifetime.

They have been tested by the writer, in some severe cases, with perfect results; among them, one case of compound, comminuted, multiple fracture of both legs. The bones in the right leg penetrated the skin in five different places, and in the left leg in three. Several loose fragments of bone had to be removed. The usual dressings were tried, but had to be abandoned on account of the excruciating pain and stasis. Amputation of both legs was considered necessary by attending physicians, but the patient would not submit to it, and further counsel was called, resulting in the application of pneumatic splints to both legs. The pain ceased at once on application. The absence of circular constriction allowed complete restoration of the circulation, and permitted of proper open dressings for the

wounds. The splints were only worn thirty-three days; ankle and knee motion was in no way impaired; the union and result were perfect.

I mention another case, on account of the attending circumstances—one of simple fracture of the tibia. The patient was erecting a house at the time, and hauled lumber seven miles daily without discomfort and with perfect result.

Before bringing the appliances to the notice of the profession they were submitted to some of our most eminent surgeons, whose unqualified endorsement has demonstrated the unparalleled excellence of the treatment.

Nitric acid in the strength of 1 to 400 is claimed to be useful in the treatment of gonorrhœa. Injections are made four or five times daily, and are painless. The discharge lessens in two or three days, and a cure may be effected in a couple of weeks. For posterior urethritis, a deep injection of a one per cent. solution may be used, once a day.

Cowling's rule for calculating the dosage for a child is: Age at next birthday, divided by twenty-four. The fraction of the adult dose will be correct for the child. A simple method in writing the prescription, is to make it contain exactly twenty-four doses, then the entire amount of any drug in the prescription will be the adult dose multiplied by the child's age at the next birthday.

Saline infusions may be employed with advantage in certain cases of diphtheria, particularly in late cases where treatment by antitoxin is futile, and there is restlessness, thirst, vomiting, and heart weakness; also in early cases, to dilute the antitoxin and promote elimination by diuresis. A pint of saline solution may be injected subcutaneously, the site of injection being the back or right breast. The result is usually gratifying—the thirst and restlessness being allayed, and the pulse showing marked improvement. Diuresis is more free, and sleep is commonly induced.



SCIENTIFIC MISCELLANY

By LAWRENCE IRWELL, M. A., B. C. L.

Concerning Longevity.—The late Sir George Humphrey devoted a great deal of time and labor to an investigation of facts concerning longevity. He examined the family history of nearly one thousand persons, seventy-four of whom were almost one hundred years old. His conclusions were somewhat as follows: The most important factor is a "good" constitution, which appears to be largely dependent upon satisfactory digestive and nutritive functions. An energetic temperament and active habits are conducive to long life, but it is impossible to avoid the conclusion that the vital machinery is wound up, so to speak, for a given period and, except for accidents, or in spite of them, it is likely to go on till the appointed time has elapsed. This fact involves some extremely complex problems in heredity, the solution of which is very far off. To an individual who comes of a short-lived family, extreme old age is not often vouchsafed; but it can be shown by statistics that with proper care a person of the phthisical type may reach the age of thirty-five without being attacked by the Koch bacillus, and when this age has been passed, there is no reason why, with suitable surroundings and food, long life should not occur. The truth is, however, that those who inherit the phthisical diathesis usually dislike the albuminous foods, and insist upon trying to live upon a carbohydrate diet. This assertion is specially applicable to young women, who often regard cakes and candy as the most important foods upon the daily list. The late Sir Andrew Clark, Mr. Gladstone's physician and friend, told Dr. Alexander Haig that, when young, he had to choose between gout and phthisis. "I chose gout," he said, and in Dr. Haig's "Uric Acid as a Factor in the Causation of Disease," we read (p. 381) that Sir Andrew "evidently thought that by eating a large amount of animal food he was cured of phthisis and got gout in its place." . . . The probability is, of course, that "cured of phthisis" means the disease was warded off. Dr. Haig continues: "There can be little doubt that the late Sir Andrew Clark chose wisely, for though collæmia and high blood pressure caused his death, he had lived for many years an

active and useful life, which phthisis would have made impossible." Sir Andrew died in 1893, at the age of sixty-seven.

Persons who inherit the phthical diathesis need a great deal of albuminous food. Cheese seems desirable at least once a day. The danger connected with milk does not appear to be present to any extent in cheese. The number of deaths from tuberculosis pulmonalis in the United States in 1890 was 102,199. The census figures for 1900 are not yet published.

White Bread Versus Brown Bread.—What passes for "science" in popular publications is not always "up to date." A ten-cent magazine with a very large circulation contains, in its February issue, an article which deals with diet and kindred topics. The author, who is a physician, says: "Our white bread contains little else but the starchy or carbonaceous matter, which supplies only heat and energy." He makes no reference to gluten, but tells us that "we pay a dear price for having *white* bread on our tables. The wheat grain contains phosphates . . . nitrogenous matter . . . and carbonaceous . . . matter. All these should be contained in our bread; but instead, the flour is passed through a bolting cloth," and almost everything but starch is removed by that process.

Let us look at the other side of this question. An ounce of experiment is worth more than a ton of hypothesis. Within four or five years the bread question has been thoroughly investigated by Dr. Lauder Brunton, of London, England, whose report was published in either the *Lancet* or the *British Medical Journal*.

While it is true that whole-meal bread contains more nitrogen than white bread, it is necessary to remember that the nitrogen found in cereals exists in two forms: the coagulable and the non-coagulable albuminoids. The latter are almost useless for purposes of food, because they consist of alkaloids and nitrogen salts. The fine portion of the flour contains some coagulable nitrogen; the other parts of the flour contain nitrogen, which has very little value as food. There is, in addition, another point of importance. However finely whole-wheat flour may be ground by the use of steel rollers, it contains gritty particles, which irritate the alimentary canal and lead to the evacuation of partially digested food. As a result, whole-wheat bread has a laxative property which may have some value in cases of chronic constipation so often due to the insufficient consumption of water. But the claim that the so-called Graham bread (or brown bread or whole-wheat bread) is a better food than white bread is nothing short of a fallacy, because the latter contains all the available nitrogen that is found in the wheaten grain.

Parthenogenesis (Virginal Reproduction).—A couple of months ago I received a letter from a gentleman, a physician, who asked me to inform him of some form of life which reproduces its species both parthenogenet-

ically and also by sexual fertilization. The facts are as follows: Reproduction without fertilization is not known among mammals. In the insect world, however, it is very common. Aphides (plant lice) reproduce both ways. During the summer there is a constant production of females, which are viviparous (born alive), without any fertilization upon the part of the mother. The progeny have, as a rule, no wings. But the reproduction of these insects is so rapid that the plants upon which they live would be destroyed if another form of the species did not arise. Occasionally, therefore, a female is produced which has wings, and she, taking herself to another plant, starts a new colony. The progeny of these "colonial" aphides, in turn, resemble their grandparent, in the fact that wings are usually absent, though the preservation of the species is provided for by the occasional appearance of a winged individual. (The phenomenon referred to—the likeness of the insect to its grandmother, and not to its mother—is known as metagenesis, or the alternation of generations.)

As yet no male has appeared upon the scene. But colder weather and the scarcity of food result in the birth of males, which fertilize the females, and eggs are then laid. These eggs do not usually hatch until spring.

The relation between sex and feeding can be easily demonstrated with tadpoles. If they are fed upon meat, and plenty of it, the percentage of female frogs will be about eighty. Upon the other hand, if the tadpoles are given little albuminous food, the percentage of female frogs will be less than forty. Semi-starvation must be avoided, for it is likely to prevent the metamorphosis, and to keep the tadpoles indefinitely in the sexless stage.

The life-history of aphides sounds like a romance, but it is well authenticated, and not particularly difficult to prove.

Dr. Brown-Sequard's Experiments Upon Guinea-Pigs Repeated With a Different Result.—For almost a dozen years the neo-Lamarckians were never tired of telling us that the late Dr. Brown-Sequard proved that the drooping of the eyelid known as ptosis, when artificially produced in guinea-pigs, was transmitted to the next generation. Personally, I never believed the assertion, because a droop of the eyelid in dogs, upon whom no operation has been performed, is not very rare, and the same *may* be true of guinea-pigs. But we now have some direct evidence upon the question. Mr. Leonard Hill, of University College, London, has repeated Dr. Brown-Sequard's experiments, with a very different result.

By division of the cervical sympathetic nerve a permanent droop of the upper eyelid can be obtained. According to Brown-Sequard, this was inherited by the young. Mr. Hill divided the nerve in six guinea-pigs on the left side, but none of the "children" of these animals inherited the permanent droop of the eyelid. He again divided the nerve in twelve of the "children," and interbred them, but none of the young inherited the permanent droop. Mr. Hill observed a temporary droop of either the

right or left upper eyelid in some of the young, but this was caused by conjunctivitis, arising from infection after birth, for the young were never born with the droop. When the conjunctivitis disappeared, so did the droop, which was not due to paralysis, but to photophobia. It often disappeared upon sudden excitation of the animals.

These experiments have knocked out one of the main "props" of neo-Lamarckism. It is true that Dr. Wolf, of Baltimore, has discovered some Jewish boys who were born ready circumcised, and a few others whose prepuce was short at birth. But if the learned doctor, instead of asking us to believe that this proves the heredity of acquired characters, will search with sufficient diligence, he will find that non-Jewish boys are sometimes born without a prepuce.

Ventral and umbilical hernia are operated upon by Hagen in the following manner, based upon the idea of covering the defective and thin cicatrix by muscular flaps: After incision through the abdominal wall, the peritoneum and fascia are united by sutures. After extensive lateral loosening of the skin, the external sheath of the rectus is divided at about the middle of the belly of the muscle. Carefully avoiding the nerve branches, a portion of each muscle is loosened so that it may be turned inwards, placing the external portion of the muscle against the already sutured fasciæ. These muscular flaps are sutured in place and the skin united over them. Great success is claimed in the practice of this operation.

Dawbarn, in his paper on the technique of bloodless operations, recommends a simple expedient for the diagnosis of fractures at the elbow where swelling has taken place. He credits the method to Dr. Gerster. In case of a fracture or dislocation, or both conditions combined, at the elbow, when swelling has already taken place and a speedy diagnosis is imperative, this cannot be reached by the X-ray's alone. He anæsthetizes the patient and applies a rubber bandage from the fingers to the shoulder firmly and slowly; this is left on for fifteen to twenty minutes. Then the bandage is unrolled, leaving the last turn or two in place. Upon examination now all the swelling and œdema will have disappeared and all the bony points of examination will be exposed as upon the other arm. Whatever condition is found is corrected, the positive diagnosis, made and the swelling allowed to return. The method is easy of execution and of greatest value regarding the prognosis.



A Text-Book on Practical Obstetrics. By EGBERT H. GRANDIN, M. D., Gynecologist to the Columbus Hospital; Consulting Gynecologist to the French Hospital; Late Consulting Obstetric and Obstetric Surgeon of the New York Maternity Hospital; Late Obstetrician of the New York Infant Asylum; Fellow of the American Gynecological Society, of the New York Academy of Medicine, of the New York Obstetrical Society, etc., etc., etc., with the collaboration of GEORGE W. JARMAN, M. D., Gynecologist to the Cancer Hospital; Instructor in Gynecology in the Medical Department of the Columbia University; Late Obstetric Surgeon of the New York Maternity Hospital; Fellow of the American Gynecological Society, of the New York Academy of Medicine, of the New York Obstetrical Society, etc. Third Edition, Revised and Enlarged. Illustrated with 52 Full-Page Photographic Plates and 105 Illustrations in the Text. $6\frac{1}{2} \times 9\frac{1}{2}$ inches. Pages xiv-511. Extra cloth, \$4.00, net; sheep, \$4.75, net. F. A. Davis Company, Publishers, 1914-16 Cherry street, Philadelphia.

This is one of the clearest and most practical treatises which has lately come to our attention. The illustrations are especially commendable, being beautifully clear and well selected. The whole range of obstetrical practice is ably covered.

Physical Diagnosis in Obstetrics. By EDWARD A. AYERS, M. D., Professor of Obstetrics in the New York Polyclinic; Attending Physician to the Mothers' and Babies' Hospital. A Guide in Ante-Partum, Partum and Post-Partum Examinations, for the Use of Physicians and Undergraduates. With Illustrations. Price, \$2.00. E. B. Treat & Co., Publishers, 241-243 West 23d street, New York. 1901.

A practical and useful guide to the methods to be used in gaining information relative to the puerperal state. Forms for keeping case records are given, and the reasons for noting of various conditions are noted. The book will be found a useful adjunct to the library of any obstetrician.

The Tale of a Field Hospital. By SIR FREDERICK TREVES, Surgeon Extraordinary to H. M. The Queen. It is Printed in Red and Black; Bound in Leather with Gilt Top. Size, 6x7; 115 Pages and 13 Handsome Illustrations from Photographs. Price, \$2.50

Sir Frederick was sent to the front in the African War by the English government as consulting surgeon to the forces, and the book is his ac-

count of a field hospital, which followed the Ladysmith relief column from the time that that column left Frere until it entered the long-beleaguered town.

This record is based upon notes written day by day on the spot. It may be that the story is a little somber and possibly on occasions gruesome, but war as viewed from the standpoint of a field hospital presents little that is cheery.

A System of Practical Therapeutics. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia; Physician to the Jefferson Medical College Hospital. Second Edition, Revised and Largely Rewritten. Vol. I. With Illustrations. Philadelphia and New York: Lea Brothers & Co. 1901.

This volume includes general therapeutic considerations, prescription writing, remedial measures other than drugs, preventive medicine, and diathetic diseases and diseases of nutrition. The best modern methods in the treatment of disease will be found in this work, and any physician may derive considerable practical benefit from it as a work of reference.

Diseases of the Nervous System. A Text-Book for Students and Practitioners of Medicine. By H. OPPENHEIM, M. D., Professor at the University of Berlin. Authorized Translation by EDWARD E. MAYER, A. M., M. D., Pittsburg, Pa. First American from the Second Revised and Enlarged German Edition. Octavo; 899 pages, with 293 Illustrations. Philadelphia and London: J. B. Lippincott Co. 1900.

Professor Oppenheim is a prominent figure in the field of neurology, and his writings bear the stamp of original research and unquestioned authority. The work is admirably arranged and is ably translated; and the whole subject of nervous diseases is treated in a most practical manner.

Vascular nevi in infants may be successfully treated by compression, if early observed and attended to. The compression is accomplished by painting the surface with a mixture of one part ichthyol with nine parts collodion, two or three times a day. The brown pellicle that forms compresses the nevus until the rapidly growing surrounding tissues have caught up with the excessive growth of the angioma or nevus.

MEDICAL TREATMENT.

The Army Surgeon and Typhoid Fever.—Osler, in a few pointed remarks in a paper on perforation and perforative peritonitis, says that the student should be given a better chance to study typhoid fever in its progress from day to day, and points to the methods now employed of delivering brilliant lectures, reading of extensive theories and occasionally seeing cases *en passant* in the clinics as inadequate. He quotes the reports of Reed, Vaughn and Shakespeare, on the prevalence of typhoid fever during the Spanish-American war, and the inadequacy and inability of the army surgeons to diagnose the disease. Of twenty thousand cases less than fifty per cent. were recognized; the rest were treated as malaria or awaited the transfer to various hospitals ere a diagnosis was made. The authors of the report allowed themselves the apologetic remarks that likely the army surgeons did better than would have done civil physicians; which leads to the supposition that the army has the pick and choice of the profession, while in truth the aspect is somewhat changed.

The young physician entering the army is, as a rule, well trained theoretically. Leaving aside the few cases of senatorial or personal influence, a rigid examination usually shows the candidate has been well crammed up, and is really fit to go into the service. If they only had a course of practical medicine after having passed the examination, able men could be made of the material making up the army staff. This is not the case, and the men remain what they were—theoretically trained puppets, able to dance, court and write glowing letters back to the villages they have emerged from. When thrown into active service they are unfit to meet an emergency; while during peace they grow from overtrained youngsters to pedantic, rusty bigots, who hold their juniors down to their own level by the degrading caste feeling engendered by military discipline and an inactive life. It is this continually patting themselves on the back that makes the army surgeon not only intolerable to the rest of his profession, but also engenders friction between the M. D. of the regular staff and the so-called contract surgeon.

Anæsthesia of the Spinal Cord Through Cocainization.—J. B. Murphy has collected five hundred and ninety-two cases, and reports on its technique and results.

Among those cases there was one death (Tuffier). Of five deaths reported due to the anæsthesia in Tuffier's clinic, four were due to other causes. He places stress upon four points: The technique of preparing the solution, of using the proper quantity, of selecting the proper place, and of proper care of the patient afterwards.

The cocaine should be prepared by chemists who give special attention to the sterilization of the crystals, and the solution should be made under all aseptic precautions. The dosage ranged from gr. 1-20 to 1-10 for children. A dose of gr. 1-20 had been used in a child two and one-half years of age.

In adults the dose ranges from one-sixth to one-half grain. In his personal experience he had not used more than m. xv of 2 per cent. solution, but generally uses only m. x to xij, except for operation on the cervix or hæmorrhoids. The symptoms after the injection of cocaine, in order of their occurrence are: great thirst, mental depression and pallor; nausea and vomiting do not last longer than a minute or two. In one of his own cases the vomiting lasted five minutes; nausea lasted longer, but was never severe enough to interrupt the operation. A very important manifestation is the elevation of temperature following the cocainization, the temperature going up to 103° F. The duration of the analgesia lasts sufficiently long for any ordinary operation. In a case of osteotomy of the femur the operation last one hour and twenty minutes, analgesia being perfect during the whole time.

Prevention of Puerperal Septicæmia.—In our warfare with bacteria we do not aim to exterminate all possible pathogenetic organisms, but to render their presence harmless after their number has been reduced. On the human body bacteria abound without leading to constant trouble, their innocuous presence being to the action of the respective tissues upon which they are located. It is as impossible to render a vagina sterile as it is to sterilize the obstetrician's hands, yet sepsis does not frequently follow normal labor. The development of sepsis depends upon the introduction of heterogeneous germs in probably pure culture. A very formidable source of virulent germs, causing a series of severe infections of the puerperium, is the rectum and anus. The anus infects its neighborhood, furnishing, also, infectious material for the vulva and vagina. The preparatory cleansing of the patient, therefore, is of utmost importance. On the morning of beginning labor the patient should receive a hot bath and a thorough flushing of the rectum with a hot soap-suds solution. This flushing should consist of two steps: 1st, a large injection, in order to remove the fæcal masses; this should be followed in half an hour by another injection to remove whatever is left. After thoroughly evacuating the intestines the perineal region should be scrubbed, shaved, and washed again. A hot douche is given of 1-1000 bichloride or 1-100 lysol, and the external genitals, creases and folds of the perinæum washed with the antiseptic solution. An occlusive dressing of gauze and cotton is then placed over the genitals, and the same is changed every time the patient urinates or discharges fæcal masses. After each evacuation the anus and genitals should be carefully washed, as before.

Physicians as Witnesses.—In ordinary cases, where a physician's statement is used only as corroborative evidence, or where the physician has to give evidence of only secondary importance, the practice should be introduced to get the physician's statement in the shape of a deposition. While the physician owes the State he lives in some consideration otherwise than the dues he pays to the commonwealth in waiting on the indigent and guarding the health of the commonwealth, the obligation the profession owes to the State should not lead to misuse of the physician's time in trifling cases. All physicians know what a nuisance it is to be subpoenaed to a court-room, and to go there day after day to suit the pleasure of a snobbish judge or some dipsomaniac individual whose fancy it suits to juggle with his cases and the time allowed for the trials. The physician can aid justice well enough by sending in his sworn written statement; and unless the judge knows less of justice than of bribery, or unless it be in the interest of either party of the suit to influence the jury by the personal magnetism, the display of wit of the witness, or the holy show of cross-examination, a written deposition will come as near bringing forth the truth as will the system of harassing brow-beating now in vogue. The justice who fined and remitted the fine of a physician for contempt of court because he had failed to appear as a witness, being detained by a very ill diphtheria patient, saying: "It were better the patient had died than that the commonwealth's witnesses should place themselves in contempt of court," had evidently not so much the commonwealth's fortune before his eye as his own estimable dignity. The commonwealth, being in no danger requiring the sacrifice of human life, depends for its welfare upon the health and welfare of the individual, and must not throw obstacles in the way of professions ministering to the welfare of its citizens. But judges are human and erring. This particular judge probably felt the necessity of displaying his loyalty for the community to the extent of sacrificing human life before an election, and counted on the grand-stand play to make his constituency forget, probably, sins of service committed during the past term. Judges are queer animals sometimes, and their disregard of other professions is only equaled by their ignorance of the rights of the individual.

Tetanus from Antidiphtheritic Serum.—During the last few months there have been an unusual number of diphtheria cases in Italy, and antidiphtheritic serum was extensively used, nearly all derived from the Milan Institute of Serum Therapy, under the charge of Belfanti. According to the *Muench. Wochenschrift*, eight cases in a small town were injected with the serum, and all were recovering, when, on the sixth and ninth day, they were taken with fulminating tetanus, and all but one died. Similar experiences were reported from other points, with a total of thirteen deaths. The boards of health of Rome and Milan met in emergency session and closed the institute. Three hundred and five vials, all of a certain series, were delivered between November 29th and December 1st,

and two hundred and thirty were recovered by speedy telegrams to the persons who had obtained them. Animals, injected with the suspected serum, failed to develop tetanus, and no tetanus bacilli could be demonstrated. Italy does not observe an official standardizing of sera, as in Germany. The accident is likely to cause special regulations by the government.

Dosage of Cocain in Intraspinal Anæsthesia, and Technique of Administration.—Murphy, in his summary of the cases he has collected, finds that most surgeons agree that a two per cent. solution is preferable for adults, except in younger patients, where a one per cent. solution should be used, as advocated by Bambridge. The quantity to be used of the two per cent. solution ranges from seven to twenty minims; it depends upon the peculiarities of the patient, the extent of the operation, and the site of the operation. It is seldom necessary to use more than fifteen minims, and, except in rectal and vaginal operations, usually less than ten minims.

Cocain being very unstable when exposed to the air, the method of preparation is of great importance. It will not tolerate boiling for sterilization. The solution should be freshly prepared each time by adding a definite quantity of sterile water to a definite amount of crystals, weighed amounts of which may be previously sterilized in waxed paper and kept ready for use. The hypodermic syringe used for injection must be made of material which can be boiled after each injection. The quantity of solution drawn into the syringe should exceed that which is used, as some solution may be needed to free the needle-point from blood, in case there is difficulty in entering the canal. The set-screw governing the quantity of fluid should be placed before connection with the needle is made. Before inserting the needle the skin may be frozen with ethyl chloride, and a puncture made with a scalpel, to guard against infection from the skin.

Streptococcus Infection of the Peritoneum.—Infection of the peritoneum can take place through the blood stream as well as through a primary route in surgical operative cases. It is often seen in newborn children, where infection commonly occurs from umbilical infection. In adults it is either primary or follows a streptococcus angina. It is most often seen in women who have streptococcus infections of the sexuo-genital organs. In such instances the infection is brought about through the menstrual flow, and thence through the periuterine lymphatic spaces and vessels to the peritoneum itself. Another form of peritonitis due to this organism may follow in the wake of an erysipelas of the abdomen, or may be conveyed by the lymphatic vessels from the pleural cavity in a case of streptococcus pleuritis. Although this condition is met with in the woman, it is a fact that experimental work with animals, such as rabbits, looking toward a demonstration of the fact that streptococcus infection of the peritoneum may take place through the blood stream, has been a signal failure in every instance.

NEW REMEDIES

Eosolate of Quinine (Chininum Eosolicum)—The formula for this mono-acid salt is as follows: $(C_6H_7S_3O_{12}) (C_{20}H_{24}N_2O_2)_3$. It is accordingly composed of about seventy per cent. quinine alkaloid and ten per cent. creasote. It is a valuable remedy in the treatment of malaria with mixed infections. It is evident that a remedy combining the antiseptic and anti-malarial action of quinine with creasote will be most effective in the side affections which accompany malaria. In the uncomplicated forms of malaria it is, of course, as effective as the common preparations of cinchona, with the added advantage of forestalling complications.

The following are case records noted in a local hospital:

CASE 1.—H. F., aged forty-three. History of excessive indulgences in alcohol. Ill for three months past, during which time he had coryza, cough, chills and fever at irregular intervals; muscular pains all over body, headache, lassitude, diarrhea, gastro-enteritis, loss of appetite and insomnia. Liver and spleen enlarged. Blood examination shows plasmodia. He had been dosing himself with quinine sulphate, with only temporary relief. Eosolate of quinine administered five grains t. i. d., and improvement was gradual, but satisfactory.

CASE 2.—H. S., aged seventeen. Good personal and family history. Had been in one of the intensely malarial districts of Indian Territory for four months, during which time he had severe rigors almost daily, with ordinary malarial symptoms. For a month past ankles and feet have been edematous. Marked cachexia and emaciation. Urinalysis shows presence of blood cells and blood casts, with about one per cent. albumins. He was first given routine treatment of quinine sulphate, arsenic and iron. The malarial paroxysms ceased, but the intense anemia persisted, and his general condition improved but slowly. A month after entrance, quinine having been discontinued, he had several severe rigors, and his blood showed fully developed plasmodia of the tertian type. Eosolate of quinine was given. There was no return of chills or fever, and patient left hospital two weeks later in very good condition, with very slight cachexia and without symptoms of nephritis.

CASE 3.—J. L., aged forty-one. Family history of phthisis. Unwell for more than a year past. He first had typical malarial attacks, which were irregularly treated with quinine, with temporary relief. His health steadily declined, and about four months ago he became unable to work. Has lost about twenty pounds in weight. Has chilly sensations daily, followed by fever and general discomfort. Occasionally night sweats. Temperature ranges from 99° in morning to 102° in afternoon. Patient is emaciated and anemic. Relative dullness with prolonged expiratory murmur, and increased vocal fremitus over both apices; cough with copious muco-purulent expectoration. Sputum examination showed streptococci and staphylococci; no tubercle bacilli. Plasmodia present in blood. Diagnosis: phthisis and malaria. Treatment: quinine eosolate. Patient remained in hospital twelve days. Temperature became normal; cough

less severe; and there was marked general improvement, with a gain of several pounds in weight.

Borobenphene (Heil).—It has the antiseptic properties of boracic acid, sublimed benzoic acid from Siamese gum benzoin, phenol, etc., and is prepared by a special process, by which a powerful, safe, reliable, non-irritating and pleasant antiseptic is produced.

It mixes in all proportions with water, glycerine and alcohol.

It prevents the development of bacteria and decomposition of animal and vegetable matter, and destroys bacteria in every form, is a valuable remedy for the treatment of affections of the ear, nose, throat and mucous membranes of the human body, whenever an antiseptic is indicated, and is of great benefit in the treatment of bronchitis by inhalation. It also possesses powerful healing properties, and may be applied locally to wounds, ulcers, abscesses, etc., or used as a gargle, inhalent or injection, in full strength or diluted to suit the varied conditions.

Glycobenphene (Heil).—Practically same formula as above with the addition of *absolutely pure* oxid of zinc.

It is an excellent dressing for wounds, and heals the oldest sores within a few days. In the treatment of ulcers and abscesses it is invaluable. It can be used freely with absolute safety—in fact, it should be used freely to obtain the best results.

Glycobenphene is also indicated in facial eruption, erysipelas, hives, burns, scalds, mosquito and other insect bites, and it is a positive remedy for dandruff.

An original bottle, holding one pint, gratis to any physician wishing to try it. Simply make application by postal card to Henry Heil Chemical Co., 212 S. Fourth street, St. Louis, Mo.

Lyptol in Minor Surgery.—(By L. J. Pritchard, M. D., Institute, N. C.)—As practitioners of medicine we are constantly meeting with cases of minor surgery which seem to require some kind of dressing, that of the form of an ointment. Ointments can be better used by the ordinary class of patients, as they seem to understand their use better than powders, washes, etc., and they seem to satisfy them better for the surgical troubles for which we are consulted than anything else. Having experimented with numerous ointments offered by various pharmaceutical houses, and several extemporized by myself, as well, I accidentally stumbled across a sample of lyptol, and gave it a thorough trial as an application in minor surgery, and find that it is not wanting in any particular. Being composed of the most potent antiseptic and healing agents known to the science to-day, it stands to reason that it is an ideal application, and as such I have found it on all occasions.

The following related clinical histories will aptly illustrate its uses and the results to be expected therefrom:

An old woman presented herself at my office suffering with an ulcer of the outer side of right leg. The ulcer was of several years' duration, and several physicians had treated it during its existence. I gave her a box of lyptol, and directed her to thoroughly cleanse it every morning and

night with warm water and soap, and apply the ointment in good thick layers and then cover parts with a thin muslin cloth to prevent anything from injuring it. Two weeks later she came back, and stated that her leg was almost well. I found upon examination that a great deal of progress toward recovery had been made during that time. The ulcer was not more than one-half its former size, and I feel that the old woman had assiduously carried out my instructions. I renewed her supply of lyptol, and when I next saw her, three weeks later, she told me that the place had entirely healed.

A young man came with a well-developed case of chancroids, with which he had been troubled several days. The amount of discharge was something more than usual, and the places evinced no signs of healing. I prescribed lyptol, and directed him to apply same three times daily after carefully and thoroughly cleansing parts with soap and warm water. I quieted his apprehensions as much as possible, and asked him to report in six or eight days. He did so, and all the chancroids had about healed. A few days more sufficed for a complete cure.

I have used lyptol for all varieties of venereal lesions, and find that it gives the best of results in all cases. It is easy of application, and commends itself in many other ways as well.

I prescribe it extensively in cuts, bruises, sores, etc., and it always acts well, the affected parts usually recovering in a short time. The following case will illustrate it well in cuts:

A farmer cut his leg with a sickle blade. The wound extended to the bone in an oblique direction and severed nearly all the fleshy structures on the back of the leg. He sent for me. I sewed up the wound, after having cleansed it carefully, and used lyptol for a dressing afterwards. The place healed perfectly in ten days' time without a particle of pus formation. Of course in the treatment of wounds with lyptol the same antiseptic precautions are to be observed as far as possible, for that greatly lessens the tendency to pus formation due to infection. However, I desire to state that I have found lyptol an excellent pus destroyer and disinfectant, and when I use it on wounds I use nothing else for those effects.

I find lyptol an excellent application in all forms of burns. It has a soothing, healing and antiseptic action, thereby preventing infection to a great extent and hastening recovery. In fact, I use it as a local application in nearly all forms of lesions presenting themselves and requiring local treatment, and the fact of my almost universally using it should be sufficient to cause the most skeptical to know that I fully believe in its efficacy as a therapeutic agent. I use it as a lubricant in all my obstetrical and gynecological work, and find that it serves that purpose better than anything that I have hitherto tried.

Pepto-Mangan "Gude."—(By Wm. Krauss, Ph. G., M. D., of Memphis, Tennessee, Director of the Microscopic Laboratories, Memphis Medical College; Pathologist and Visiting Physician to St. Joseph's Hospital, etc.)—Some five years ago I wrote a paper for the *Memphis Medical Monthly*, giving a *resume* of the evolution of the iron compounds, and appended a report of cases, giving blood counts, etc. The manufacturers of the preparation I preferred saw fit to reproduce the case reports in their

pamphlets, but said nothing about the reasons that induced me to prefer their product.

At a recent joint meeting of physicians and pharmacists I was criticised for opposing the use of ready-made compounds, while still advocating the use of pepto-mangan "Gude," which is a proprietary preparation. I hesitated considerably about bringing the matter up again, because I dislike to build up a reputation as an endorser, *and have never in any other instance written an article endorsing a proprietary preparation.*

I hope, however, to show you that there is no pharmacopœial preparation that meets the requirements of an ideal iron compound, and, until this is found, I intend to continue to use what has never disappointed me, and is not based upon mere faith. The work of Bunge is too well known to be now quoted, and I will only make a few experiments before you this evening and show the reasons for the faith that is in me. There may be other proprietary iron compounds, and doubtless there are, that will come up to the same requirements, but I see no advantage in swapping the devil for the witch.

It is not necessary to repeat all the tests with all the official iron preparations, because they are divisible into groups, all the salts of one group behaving very much alike toward the gastric and intestinal juices.

An ingenious theory recently put forward regarding the action of the mineral salts of iron is, that they decompose the substances in the intestinal tract which precipitate the *food iron* so that it may be absorbed. This is the only rational explanation of the fact that we do occasionally get results from them. On the other hand, it is far more rational to use an iron compound that can be and is absorbed, for then we are reckoning with known quantities, instead of blundering along, giving more iron at a dose than is contained in the entire body, and incidentally deranging the digestive functions by precipitating the gastric, pancreatic and intestinal juices, and producing constipation by reason of the very astringent nature of some of the iron salts.

Beginning with the organic double salts, of which the scale salts are representative, we notice upon the addition of this gastric juice that a precipitate is formed; the double salt is decomposed and ferric salt remains, which is insoluble, both in gastric and intestinal juice.

The tincture of ferric chlorid will precipitate some of the gastric constituents, though most of the iron will remain in solution in the hydrochloric acid; the iron still in solution will not be absorbed, because its non-diffusibility is taken advantage of in the manufacture of *dialized iron*, the acid passing through the animal membrane; when the iron finally reaches the intestine, the alkaline carbonates promptly precipitate it. Ferrous sulphate behaves similarly. In both instances, as you see, the very insoluble ferric oxid is finally formed. If you have ever tried to remove iron stains from your water pitcher, you have some idea how insoluble it is.

The insoluble compounds, like reduced iron or Vallet's mass, only serve to render inert the arsenic with which they are usually prescribed; if dissolved at all in the stomach, they are re-precipitated in the intestine.

Taking now Gude's preparation, we find it soluble, not only in all these reagents, but also in a mixture of them. Potassium ferrocyanid

readily gives the iron reaction; excess of ammonia will separate it, redissolving the manganese, which is then recognized by the color of its sulphide; the alkaline copper solution gives the reaction for pepton, showing that it is what the label says. It mixes with arsenious acid, forming a perfect solution, thus giving us a most useful hematopoietic agent. The soluble alkaloids are perfectly soluble in it, as is also mercuric chlorid. Being a pepton, it is readily diffusible by osmosis.

The only disturbing agent in the intestinal tract is hydrogen sulphid this will precipitate it, but presumably much of the iron must have been absorbed before it encounters this gas; if not, appropriate agents should be used for its elimination.

Therapeutically, it does not nauseate, constipate, discolor the teeth, precipitate the digestive agents, nor become inert from contact with them. As to the clinical results, I need not add anything to the many reports already on record.—Read before the Memphis Medical Society.

Fever Therapy.—Since 1890 I have used acetanilid almost entirely, partly on account of its cheapness, and also for its good effect. In a case of continued fever, recently, I used a new remedy, "salo-sedatus," that works pleasantly and to the good of the patient. In case of a child with enteric fever resembling typhoid, I used it in two and three-grain doses *pro re nata* with effect of quieting the nerves, reducing the temperature, and, I believe, aborting the disease, as the child was free of fever by the ninth day and up about the house by the fourteenth. Also, it had every symptom of typhoid, even to the yellow color of the palms of hands and soles of feet. It used to be taught us that typhoid fever *must run twenty-one days* at least. Years ago I had cases that ran twenty-one and twenty-six days before abatement; but within the last ten years I have either not had a case of typhoid or, somehow, it got out of gear and ceased to run on. How much the coal-tar derivatives have had to do with this change I cannot say, but I have used them in all and every case of continued and periodic fever that has come under my care.

It is broadly stated that deaths have been caused by small doses of two and three grains of acetanilid. I seldom give to children less than two grains and to adults eight to ten grains, and I have yet to see the first dangerous symptom to follow its use. True, a little cyanosis followed in a very few cases, but a small amount of coffee, whisky, or other stimulant corrected it in a few minutes. At the same time I have known of seven deaths inside of a week in one locality from hematuria brought on by quinine. The pleasant compounds will take the place of acetanilid very considerably in the future, the salo-sedatus salt being one of them, as there results no cyanosis from its use to frighten those who use quinine to excess.—BEN H. BRODNAX in *Medical Summary*.

Interstate Medical Journal.

VOL. VIII., NO. 4. APRIL, 1901.

Issued Monthly for One Dollar a Year.

EDITORIAL DEPARTMENT.

WARREN B. OUTTEN, M. D.,	-	-	-	} EDITORS.
WILLIAM PORTER, M. D.,	-	-	-	
R. B. H. GRADWOHL, M. D.,	-	-	-	
OTHO F. BALL, M. D.,	-	-	-	
				MANAGING EDITOR.

Address all communications, news of medical interest, subscriptions, etc., to the INTERSTATE MEDICAL JOURNAL, CENTURY BUILDING, ST. LOUIS, MO.

THE MEDICAL DIRECTOR OF THE WORLD'S FAIR.

The office of Medical Director of the World's Fair will be an important one. Not only will the best plans for prompt medical and surgical relief be required, but there should be the greatest care for the best sanitation during the building, grading of the grounds, and the perfection of the general arrangements.

We suggest, first, that the office be created with a full sense of the responsibility attached. There will probably be more people here during the hot season than have ever been assembled in mid-summer in this latitude. An epidemic of a large number of fatal sun-strokes or a great accident, would be disastrous beyond compute.

To avert such a possibility there should be the best methods for securing plenty of pure water, good drainage, cool rest-places, and stations for medical and surgical emergency cases. Not only should there be a director, but he should be provided with a large corps of competent assistants. For climatic reasons, as well as for many others, the medical staff cannot be organized too carefully.

The medical director should be the most available and the most efficient man that it is possible to secure. He should have had experience in this work. He should be one who is willing to sacrifice something, if need be, for there will be a vast amount of work, and the office will be no *sine-cure*. He cannot be entirely guided by the experience of the directors of other expositions, for the conditions here will be unusual.

Such an office should command a good salary. The service that is demanded cannot be given by a mediocre. It should be of the most intelligent, practical and scientific order. Most of all, the office should not be filled as the result of petitions, personal influence or political favoritism. We want the best man for the place, and the profession of the city will do well to see that only the best man gets it. W. P.

THE PROBLEM OF EVIL.

The question of an explanation, scientific or otherwise, of the problem of evil in the world, may seem at first thought somewhat remote from the interests of the readers of a journal devoted to the practical science of medicine. Yet it is certain that, historically, the popularly accepted explanation of evil has had immense influence upon the development of that science. There were long centuries during which doctors of physic were looked upon askance, and a knowledge of drugs was believed to be evidence of relations with the evil one; and the more effective these drugs in relieving pain the more conclusive was thought to be the evidence of witchery, for, so it was reasoned, evil, of which pain and sickness are a part, comes from the devil, and therefore that which relieves it must come from the devil also.

In modern times we have discarded the idea that evil is the result of sin, and have attempted now and then to give to it a rational or scientific basis, one consequence of which has been certainly a much more rapid development of the science of medicine than could otherwise have been possible. But it does not follow by any means that any generally accepted explanation of the problem of evil has been established. Indeed, there is, perhaps, less unanimity of opinion on that point now than there was when the theological explanation satisfied everyone save, perhaps, a few individuals who were less simple or more disagreeable than ordinary folk. Some tell us that evil is a mystery not to be explained; others that it is possible only in a world governed or misgoverned by blind force; still others console us with the thought that the individual is sacrificed to the race, and that evil for the individual is necessary for race perfection; while we have recently been assured by a brilliant and versatile writer that evil is, after all, merely a relative term—that good, in other words, is only a lesser evil, and evil only a lesser good.

Recently there has appeared a new solution of the problem of evil which is not without interest. M. Bourdeau, writing in the *Revue Philosophique* on the *Cause et Origine du Mal*, suggests a solution which is somewhat as follows: Every organism is an aggregate of simpler organisms co-ordinated into a whole, and is itself a part of a still larger aggregate. There is, therefore, in each organism two principles working in opposition—the principle of harmony and the principle of strife. The principle of harmony is due to the co-ordinating influence of each organism over the smaller organisms which compose it; the principle of strife is due to the

egoistic opposition of each organism against the larger organism of which it is a part. Each organism has a keen sense of its own needs and tendencies, but a less keen sense of the needs and tendencies of the organisms of which it is composed, or of the organism of which it is in turn a part. This inevitable discord is the cause of evil—it *is* evil. It is a conflict which is universal, and the constant expression of which may be seen in man, in nature, in society. Last and most intolerable evil of all is death, which is nevertheless the necessary foundation and condition of life.

This surely is interesting, but what, after all, does it tell us of the cause and origin of evil? It shows us, rather, that evil is the result of the conflict, perhaps the necessary conflict, of forces. That we knew before. But what causes this conflict, and why is it a necessary one?

TUBERCULOSIS A CURABLE DISEASE.

Most physicians concede this proposition as a generality; when it is applied to the individual, they doubt. Doubt is a confession, and confession premises surrender. If we were to say that the average case of tuberculosis is more amenable to treatment and more susceptible of cure than a case of almost any other chronic disease with a tendency to fatal termination, would it be considered extreme? Yet that is exactly what we mean.

When tuberculosis shall have been better understood, when results from the most trustworthy sources shall be further investigated, and the conditions upon which favorable termination depend fully realized, the disease will have lost its terrors for the public, and physicians will take charge of the case with the same energy and expectation with which they accept the responsibility in pneumonia or diphtheria. Why should they not? The element of infection is more virulent in these diseases, and the attack upon the vital force more immediately aggressive, yet in these cases the physician has to win, and does win, a battle in a fortnight; whereas in tuberculosis, with a much longer time at his command and the factors of disease not nearly so active, he too often folds his hands when he sees the bacilli or hears the crepitant rale, and advises cod-liver oil and change of climate.

It is true that the bacilli are diagnostic of tuberculosis, but they are not the death-warrant of the patient. It is true that cod-liver is a food for some, and that change of climate aids others, but these are only a part, and, we believe, a small part, of the true physician's armamentarium. Already we can see the results of recent investigations and careful confident treatment. The death-rate is decreasing in many sections where patients are crowded together, as in places which have become famous through the press. The highest authorities and the most conscientious sanitarians are showing better results each year. Just as in diphtheria the quicker battle is won by increasing vital functions and antagonizing specific germ conditions, so in tuberculosis the longer the struggle is won

by aiding repair and opposing germ infection and colonization—with this favorable addition: in tuberculosis the physician has a longer time and, we believe, a less virulent infection, but he should be just as careful and prompt in meeting every indication as in the more active disease.

W. P.

DISEASE OF THE PANCREAS.

Clinical observations in diseases of the pancreas are few and far between. Most of the information on this subject is gleaned from dead-house records. Diseases of the pancreas, as it is well known, seldom make themselves manifest by pathognomonic symptoms. Acute hemorrhagic pancreatitis, about which so much has been written, and about which so little is known, is a common enough condition, but often is not diagnosticated. In the writer's service in a pathologic laboratory abroad, not less than ten cases of pancreatitis hemorrhagica acuta were observed at autopsy during the space of one year, and yet not one of them had been diagnosticated. The etiology of the condition is also clouded. About the only symptom that points to trouble of the pancreas is severe abdominal pain, and yet that is not always present. It is a fallacy to assume that diseases of the pancreas always cause glycosuria. Glycosuria is sometimes met with, it is true, in pancreatic disturbances, but yet it is more often absent and hardly deserves mention. Clinicians must confess that they "can't get at" this organ until they elaborate other means of detecting lesions in it.

The key to the situation lies, as usual, in solving the physiologic relationship of this organ to the rest of the organism. There *must* be something in the function of the pancreas that we haven't unraveled. Its pathology suggests that: let the laboratory physiologist do the rest.

THE PARASITIC NATURE OF ECZEMA.

Unna, of Hamburg, has persistently claimed that his morococcus is the cause of eczema. He has found it in many cases and insists that it is a specific organism for this disease. When we consider the nature of the disease, the pathology, the course and the general manifestations, we must agree with the anti-morococcus school, that the disease eczema is not a parasitic one in the strict acceptance of the term. In first order, Unna claims that he finds it in cases of eczema, and that he can reproduce the disease with it. Others have failed to do this. Unna says that eczema is a contagious and epidemic affection. The whole history of the affection shows conclusively that it is not a contagious disease. It is not even possible to prove that it is auto-inoculable. Those who favor Unna's teachings say that it is auto-inoculable because when a patient scratches another part of his body there appears at that site an eczematous patch. This proves nothing, since eczema is liable to appear at any part of a patient's body who has a predisposition for the disease. Jadessohn says truly that the disease depends both upon a general and a local predisposition, and a chemical or mechanical irritation at the site of eruption of the

process. Secondly, micro-organisms can get in their depredations and produce a mixed infection, such as a purulent state, etc. Many investigators have conscientiously endeavored to find the morococcus in fresh eczematous patches, and without avail. Galloway, of London, says that his cultures from fresh eczema were absolutely negative, and that later, when the disease had further developed, he only succeeded in finding some varieties of the staphylococcus of the skin at the affected sites. Brocq and Veillon, of Paris, also have investigated the disease and positively affirm that in the fresh, primary lesion of eczema—*i. e.*, in the vesicle, there are no organisms. Kaposi, the great dermatologic genius of Vienna, is also one who has sought in vain for Unna's morococcus. Others of renown in the dermatologic world have come to the same conclusion. The Unna doctrine two years ago was received with enthusiasm, but now, after cool deliberation and search, the dictum seems rational that eczema is not a parasitic disease. This is the same old story of too much eagerness to attach the nature of parasitism to something which is remote from it.

PROPHYLAXIS OF GONORRHOEA.

From time to time we are confronted with new remedies for the treatment of that very common affection, gonorrhœal urethritis. For the most part these remedies are heralded with much pomp and power of cure, and, in most cases, after conscientious trial, it is found that the new "specific" is an empty bubble and capable of curing but few cases.

In the last few months, ever since the appearance of W. Frank's paper, medical literature is beginning to teem with the reports of the successful abortive treatment of gonorrhœa by means of protargol injections. It was W. Frank who first discussed this subject. He recommended that a drop of a twenty per cent. glycerin solution of protargol should be instilled into the fossa navicularis post-coitum, and that this would surely prevent the development of gonorrhœa in exposed cases. He reported numbers of cases where this had proved successful. Since the appearance of Frank's article on this subject, numerous other workers along the line of genito-urinary diseases have also reported favorably upon this new treatment, and we are now of the opinion that there must certainly be something "in it" to merit such wide-spread attention. Certainly, if this method is successful, it offers a new field for prophylaxis and treatment of this disease. It is in the line of preventive medicine, wherein it is easy to predict that most results are to be looked for; it is not Utopian to believe, therefore, with such a method of dealing with gonorrhœa, that the disease can eventually be stamped out. The treatment involves no complicated apparatus, and can be followed out by those whom we may be pardoned for designating "the most stupid," and so we welcome it, and say that all honor and credit should be given to him who first recommended it.

STAINING OF THE DIPHTHERIA BACILLUS.

Of late the subject of staining of the diphtheria bacillus has been occupying the attention of bacteriologists, and several new methods for specific staining have been brought forth. We know that with the method commonly used—simple staining with alkaline methylene blue—characteristic pictures of the Klebs-Loeffler bacillus have been presented. The picture referred to is the so-called “polar staining,” whereby deep areas of blue are seen in the body of the bacillus with interrupted unstained spaces. Not content with this picture, biologists have been working on more improved methods. The method which seems most applicable to diagnostic purposes is that lately devised by Piorkowski, and described at length in the *Berliner klin. Wochenschrift*, March 4, 1901. He utilizes the basic principle of polar staining by beginning the staining with alkaline methylene blue for one-half a minute, the preparation being slightly warmed at the same time. The preparation is then decolorized for five seconds in a three per cent. HCl-alcohol solution. It is then washed off with distilled water and counterstained with a one per cent. watery solution of eosin for ten seconds. The preparation then placed under the high power lens presents the following picture: diphtheria bacilli show deeply stained areas of blue; intermediate spaces are stained red. The method certainly is superior to the simple Loeffler method, and aids diagnosis.

Just as is the case in the original Loeffler method, so it is in this method of Piorkowski, that the beauty of the stain depends upon the presence in the true diphtheria bacillus of the so-called metachromatic nuclei, which are the unstained spaces referred to in the Loeffler method. Much speculation as to the significance of these unstained areas has been rife among the workers with this organism, but as yet the problem seems far from solution. That they are sporogenous seems out of the question. That there is a relationship between these metachromatic nuclei and the virulence of the organism seems probable, inasmuch as their presence betokens the existence of true diphtheria as contrasted with their absence when we are dealing with the so-called pseudo-diphtheria bacillus. According to the dictum of Marx, “a bacterium loses its virulence coincidentally with the disappearance of the Babes-Ernst nuclei.”

So far nothing definite has been experimentally proved in this connection.

LECITHIN IN THERAPEUTICS.

Gilbert and Fournier have reported some favorable results obtained with the use of lecithin in certain conditions. It had a decided effect on nutrition in general in these cases. Lecithin is said to favor the assimilation of azote and of phosphorus, according to the observations of Desgrez and Zaky. The lecithin which was used in these experiments was obtained from the yolk of egg. Lecithin is without toxicity administered subcutaneously, by the mouth, or intra-peritoneally, in doses of two to five grammes, or in smaller doses longer continued. Fed to animals, particu-

larly young animals, marked increase in weight is noted. In man lecithin is employed in pill form—0.10 to 0.50 gms.—or in subcutaneous injections in oil—0.05 to 0.15 gms. every day. In tuberculous patients with advanced lesions, treated with lecithin, it has been noted that there ensues an increase in appetite, gain in weight and a general improvement. In two cases there was observed diminution in the cough, in the quantity of sputum expectorated and dropping of the number of bacilli therein. Particular attention was given to the use of lecithin in cases of neurasthenia and general functional diseases of the nervous system: in such cases improvement in the general state followed its use.

From the above remarks it is to be seen that we have another new remedy which has given good results and which deserves extended trial. That it is without toxic effects warrants its liberal use, and that it has given good results in such obstinate diseases as tuberculosis and neurasthenia, still further warrants assiduous efforts in its trial.

THE "IL-LITTERATEUR" IN MEDICINE.

One of the most reproachful things that we can imagine is to see the illiterate writings of some of our profession in the medical journals of this country. Every now and then we come across an article in the columns of—well, a medical journal so styled—portraying clearly the stamp of ignorance and illiteracy. It is an open proof of the standing of some of the profession as regards education and training. Not to speak of the ignorance of medicine seen therein, which goes without saying, these articles show clearly that there are practitioners who have crept into medicine either on false pretenses or through the kindly offices of the "wild-cat" medical colleges. Their writing shows a lamentable ignorance of all things, and represents a weird distortion of the King's English. 'Tis sad indeed that there are doctors who know so little—how much sadder is it to reflect that they must show their ignorance in print! It is a curious phase of human nature that those least adapted to writing seem most bent on it. The perusal of such work can well explain why the status of the doctor in the community is falling year by year. If it continues, it can safely be asserted that that small amount of respect that is now shown by the laity in this country towards our profession will speedily be dissipated, and that we will shortly be put on a par with the tradesmen. In contrast to this, look at the standing of the medical man abroad. In Germany, for instance, the title of "Herr Doctor" carries great respect. There the medical man occupies that position in society that is deservedly his. There the title is taken to mean a man of education and culture, not a crude thing rushed through a saw-mill medical college and turned adrift on the helpless community. It is sad to reflect on this matter and to realize how we are falling in the estimation of the people. We are poorly represented oftentimes in this country by our ignorant brothers, and it becomes a case of indiscriminate classification of a part for the whole on the

part of the laity. We can only arrest this spirit by attempting to exclude untrained men from our profession. Our medical college system must be made more thorough as regards requirements for admission. The day has long ago passed by when the study of medicine consisted in reading a couple of musty medical books in a doctor's office. Medicine has developed to such an extent that he who now enters it and who would hope to compass all that is known therein and who would progress with it, must be a man who has had the broadest kind of a liberal education and must be, withal, a man of independent thought and action, not a clown.

EPIDEMIC PAROTIDITIS.

Mumps is with us here in St. Louis, and bids fair to assume epidemic proportions. While the fatality connected with the disease is practically *nil*, still it behooves the practitioner to watch his patient with mumps, be he small or large. The disease is one which, fortunately, tends to run its course evenly without any alarming symptoms or complications; and yet, exceptionally, we see cases complicated with such a thing as orchitis, with lung involvement, and often with intestinal derangement. A complication which is rare, but which has occurred, is an affection of the pancreas—hemorrhage into the pancreas and subsequent gangrene with fat emboli, etc. Mumps needs no special treatment beyond watching, nursing and hygiene in general. Still it is troublesome and uncomfortable, especially when it strikes the hapless adult. Strict quarantine should be maintained, as it is intensely contagious.

"HEAD-KNOCKING" IN RACHITIC CHILDREN.

The phenomenon of "head-knocking" is one which is seen in some rachitic children. It consists of a constant motion of a rachitic child whereby it strikes its head with considerable force against articles of furniture, pillows. It is commonly seen in the children of London, where this disease is so common. The writer has also observed it in rachitic children in Germany's metropolis, where "*die Englische Krankheit*" (the English disease) is rapidly increasing in point of numbers. There is no suitable explanation or hypothesis for this phenomenon, and it remains for the neurologist to explain it to us.

Aldrich, in the *Annals of Gynecology and Pediatrics* for March, 1901, reports a case of this kind, and dwells at some length on the medico-legal side of the thing. He mentions the fact that these children can produce severe bruises in this "head-knocking," and were such a child to die, interesting complications would ensue should the case come before a coroner's jury: why should they not say that the guardians or care-takers of the child had maltreated and beaten it? This is a point well taken and should be emphasized. The laity would immediately jump to such a conclusion, and of course would be entirely wrong in their position.

CLINICAL LECTURE.

APHASIA; SCIATICA; NEURASTHENIA; PROGRESSIVE MUSCULAR ATROPHY ASSOCIATED WITH LOCO- MOTOR ATAXIA; MULTIPLE NEURITIS; BROWN- SEQUARD'S PARALYSIS; PROGRESSIVE MUSCULAR ATROPHY.¹

BY DANIEL R. BROWER, A. M., M. D., LL. D., of Chicago, Illinois,
Professor of Nervous and Mental Diseases, Rush Medical College, etc.

Ladies and Gentlemen:

WE HAVE here a case in which the first symptom was interference with the speech, inability to convey his ideas in writing and speaking, although he could make himself understood by signs. It is a case of aphasia for speech and writing. There is also a disturbance of the sensory and motor functions on the left side of the body. There is a marked exaggeration of the patellar reflex on the same side. We get a good leg reflex by moderate tapping, but we get nothing on the other side. The plantar reflex is also very much exaggerated. Touch him anywhere, and the foot responds violently. Babinsky's reflex is the toe reflex, and we must hold the foot in order to elicit it. The foot reflex being so exceedingly active, we have some difficulty in getting Babinsky's reflex. It is one of the great difficulties that we meet with in this class of cases. Babinsky's reflex is present, although somewhat modified. The elbow reflex and arm reflex are also very active on the left side. On the right side, it is very slight; the same amount of tapping does not produce as violent a reflex as on the opposite side. He also complains of heaviness, paresthesia, and dysesthesia of that side. The dynamometer records a strength of seventy-five on the left side, and ninety on the right side, showing a slight diminution of power in the affected side. The left leg is also slightly involved, as is plainly seen when he attempts to walk. There is a very slight tongue deviation.

Now, what is involved? Is it the upper motor neuron or the lower? A week ago we went considerably into the detail of the symptoms that differentiate disease of the upper neuron from disease of the lower. There is no apparent loss in nutrition, no atrophy of the arm in this case. Taking all the symptoms into consideration, we are warranted in saying that it is a lesion of the upper neuron. What is the probable pathological basis of this disturbance in function? There is no specific history in this case, no heart lesions, a very slight change in the nutrition of the radial

¹ A Clinical Lecture delivered at the Cook County Hospital. Reported expressly for INTERSTATE MEDICAL JOURNAL.

arteries, but the temporals are not at all tortuous, nor hard. I think that there is possibly a change in the carotids. We have no positive or absolutely certain method of differentiating cerebral thrombosis, embolism, or hemorrhage during life. The best we can do is to approximate in the diagnosis. When there is no cardiac lesion, we can, as a rule, throw out embolism. With a man at this time of life it may possibly be thrombosis or hemorrhage, but in the absence of any specific history and with the degeneration of the arteries, the probability is strongly in favor of hemorrhage. It is possible, although not probable, that this man being overworked and having used his speech center a great deal in the way of dictation, may have a cerebral congestion with localized effusion. Had this been the case, however, the exudation would certainly have been entirely removed, as his trouble dates back to April last, and normal function restored. Inasmuch as there has been no restoration of function on the affected side, I am very much inclined to think that a much graver lesion than congestion and exudation took place. I am sure that he had a small hemorrhage sufficient to interfere with the speech center and voluntary motion on this side.

What is to be done? Efforts should be made to diminish the arterial degeneration, and that is best done by the administration of alteratives and alkalies. Five grains of iodide of ammonium and five grains of the carbonate of ammonium make a good combination for increasing the alkalinity of the blood. Then there should be some diminution in the amount of cerebral function. This man also seems to be suffering from a general anemia, and he should, therefore, be given tonics. His bowels should be well regulated and the kidneys given careful attention. His diet should be limited and regulated. I do not think that there is any doubt about the fact that the consumption of too much red meat tends to promote arterial degeneration. That should be diminished; also the amount of sugar and sugar-producing foods. Galvanism to the brain yields very good results. The large positive electrode is put over the forehead, and another at the nucha, sending through the brain a current of from two to five milliamperes. Galvanism is just as useful as an alterative and a tonic, as it promotes absorption and nutrition.

SCIATICA.

These are two cases of sciatica. This man is thirty-eight years old; previous history is good. Present complaint: For the past four weeks he has had a constant dull pain in the posterior portion of the left leg, extending from the hip down to his foot. Sometimes the pain becomes sharp and shooting in character. It is increased by motion, and decreased by warmth. During the past week he has been unable to retain food. This is a very good description of sciatica, an exceedingly commonplace disease. This is a season of the year in Chicago when you will see a great many of these cases. It is, therefore, important that we should be able to make a

correct diagnosis. The locomotor ataxic patient also has pains in the leg, but sciatica has a few symptoms which are peculiar to itself. In the first place, it is a neuralgia of the sciatic nerve, and, like most neuralgias, it has its *puncta dolorosa*. There is a tender point in this case over the sciatic notch just behind the great trochanter; there is another in the popliteal space, and another tender point behind the outer malleolus, behind the head of the fibula. Frequently one is found on the dorsum of the foot. His face shows conclusively when we strike a tender point. When you have found these *puncta dolorosa*, the diagnosis of sciatica is fairly well assured; and yet every now and then errors in diagnosis are made. Another pathognomonic sign is obtained by putting the leg in a state of extension, and then raising it to a little more than a right angle with the body, when pain is felt all along the limb. Hip-joint disease sometimes produces an inflammation of the sciatic nerve. The symptoms of sciatica may then be so pronounced as to completely obscure the hip-joint trouble. Having made the diagnosis of sciatica, we must next determine whether the nerve is inflamed externally—that is, outside of the notch, or within the pelvis. This is exceedingly important. You will search the abdomen with great care by palpation, examine through the rectum, and in women through the vagina, making sure that you have no complication or pelvic source of disease. Another way by which you can eliminate pelvic disease is to inject into the sciatic nerve, just behind the trochanter, a solution of cocaine. If the disease is external to the pelvis, the pain will disappear; if is intrapelvic, there will be no lessening of the pain.

Having determined this, the next point is to ascertain the etiology. You will inquire as to the antecedent history of the patient, specially as to rheumatism. Our patient had an attack of rheumatism lasting ten weeks four years ago. Gout, rheumatism and malaria are, in this part of the world, the principal causes of sciatica. This being a rheumatic case, the internal treatment is plainly indicated. The great antirheumatic remedies in sciatica are the iodide of sodium, the salicylate of sodium and the wine of colchicum, as follows: Sodium iodide, two and a half drachms; sodium salicylate, five drachms; wine of colchicum seed, three drachms, in some convenient vehicle. The best vehicle is essence of pepsin. We will order a four-ounce mixture in teaspoon doses every four hours in much water. This combination will not only favor elimination of the rheumatic toxins, but it is also a sedative. If the patient is in great pain, give him, in addition to this mixture, a capsule containing bromide of quinine, two grains; acetanilid, one and a half grains; and to guard against the depressing effects of the acetanilid, we will add one-sixth grain *nux vomica*, which is also a tonic to his nervous system. He will take one capsule every four hours. Galvanism is also of great service in these cases. It is not only a pain-reliever, but an aid to restoration. We will put one electrode at the small of the back, and the other we will run along the sciatic nerve with a current of about five milliamperes. In the

early history of these cases galvanism should be given daily and without breaking the current. If you break the current, you produce pain. The application should be made for about ten minutes. In the interim of the galvanic treatment the limb should be treated with either hot or cold, the effects of high and low temperature being almost identical in these cases; hence follow the patient's preference. The limb should be enveloped in the application. An admirable way to apply heat is to make a good, long narrow bag and fill it with sand. This retains heat for a long time, and in addition will also immobilize the limb. Cold is applied by means of the ice-bag. These patients should have rest, as it takes a long time to cure sciatica if the patient is running about. If the patient has an antecedent history of gout or malaria, strike out the salicylate, increase the quinine, and add arsenic; if due to anemia, add iron. Sometimes the pain is so intense that the acetanilid must be given in larger amounts or a hypodermic of cocaine injected around the nerve. Cocaine is better than morphine, and there is less danger of creating a habit. Some of these cases will bother and perplex you, no matter what you may do.

NEURASTHENIA.

This case is representative of a large family of cases. She is thirty-one years old; mother died in childbirth; father died of pneumonia. She had measles at 8, pneumonia at 14. Menstruation began at 13, and has always been irregular. Three years ago she was curetted. She has had eight children and three miscarriages. Labors were nearly all difficult, one requiring instruments, and another was a breech presentation. She has never been strong. You see, she has had a good deal of strain on her nervous system all her life. Her present illness began about two years ago, at the beginning of her pregnancy. She felt very weak until about the sixth month of pregnancy, when her general health improved. Toward the close of the pregnancy her weakness returned, together with peevishness and general malaise. Following her pregnancy she caught cold and the flow stopped. She had fever, vomiting, abdominal tenderness and tympany. Since then she has developed a sensitiveness to noise, drowsiness, chilly sensations and dizziness. She has not menstruated since two months ago, and has been constipated ever since. She has pains throughout her body, and especially in her limbs. No blood count has as yet been made. She has a very feeble and rapid pulse. Her temperature throughout the illness has been practically normal. Urinalysis shows no albumen, no sugar, rather low specific gravity, acid reaction. I have no doubt that a blood record would show a low hemoglobin index and a reduction in the red cells.

The symptoms and history of this case are very plain. There is exaggerated patellar reflex, faucial reflex, no ankle clonus; the pupils are not dilated. When faucial reflex is absent in a case like this, the probabilities are always in favor of hysteria, pure and simple. In this case,

however, the slightest touch on her palatine muscles at once produces a reflex response. This is a very common case, much more so than the sciatic case. It is a case of neurasthenia, or nervous prostration. The great majority of the symptoms are subjective. Bodily nutrition is almost always perfect. The skin, muscular and subcutaneous tissue are all in a state of good nutrition. The pabulum that these tissues require is nothing like as rich as that required for the nutrition of the brain and nervous system. One of the most uncomfortable subjective symptoms that this class of patients experiences is insomnia.

If these cases come to you early, there is no treatment so valuable as is the rest cure devised by Weir Mitchell; but you will make a great mistake in applying it in advanced cases. The rest cure consists of putting the patients to bed, carefully regulating the diet, but giving them as much as their stomachs can take care of; together with this, daily massage and faradic exercise of the muscles; then bathing and entertaining. The rest cure is a splendid thing if properly carried out. The patient's whole time is taken up in the efforts of cure. There is less intro- and retrospection, the mind being kept busy with something continually. In addition to these measures, such remedies are given as the general condition commands. Some require iodides or salicylates or quinine or some other drugs. This cure will take about eight weeks, and must be followed by gradual exercise of the arms and legs in the way of light gymnastics and walking. Attend to efficient elimination throughout the entire course of the cure. Many of them have constipation and deficient renal elimination, and unless you attend to this the rest cure will amount to nothing.

Fortunately for these patients there is a hospital in every town of any consequence where they can go, away from family cares and perplexities, and receive the cure properly. Be sure and send your patient away after the cure is completed. Don't send them home, as they are very apt to relapse.

PROGRESSIVE MUSCULAR ATROPHY ASSOCIATED WITH LOCOMOTOR ATAXIA.

This patient appeared in this clinic two years ago with well-marked locomotor ataxia and a perforating ulcer of the foot. He comes now with another ulcer starting on the other foot—a little bit of a hole, which looks as though it had been made with a gimlet. It will steadily grow larger. Notice the atrophy of the thenar and hypothenar eminences, and of the whole arm. Every now and then there are little fibrillar twitchings in the muscles of this arm. There is also progressive muscular atrophy of the shoulder. It is of interest to note that the locomotor ataxia and progressive muscular atrophy are associated. Locomotor ataxia is a disease of the posterior columns of the spinal cord. In addition to that trouble this man is now developing disease of the anterior horn. This is not very surprising. The disease has been located in the posterior columns for a long time and has now jumped over into the ventral horns. As in many of these cases, the

pains began twenty years ago, when he supposed he had rheumatism. At that time there was not so much known about spinal cord diseases as there is to-day. There is nothing to do but to treat the case symptomatically, make him comfortable and improve his nutrition.

MULTIPLE NEURITIS.

This patient is thirty-nine years old; a domestic. About two months ago she noticed a weakness in the hands and feet, and sharp, shooting pains in the forearms and legs. Three weeks ago the weakness became so bad that she had some difficulty in moving about. Unless she raised the foot very high she would always trip on her toes. Two weeks ago she had a chilly sensation, which was not followed by any fever. She has had no headache, cough or epistaxis. She has vomited, but not more so than before her sickness. For two days she has been unable to walk at all.

Notice the atrophy of the forearms and hands. There is fair extensor power. The flexors do not seem to be quite as strong as the extensors. There is no power that the dynamometer can record. With the strong faradic current there is scarcely any response. The muscles respond to the interrupted galvanic current, but the feeble flexors are not expected to respond to a current of the same strength as do the extensors. The electrical reaction and the pain are enough to base a diagnosis on of multiple neuritis, and to differentiate it from Landry's paralysis, in which the electrical reactions are just the opposite. Multiple neuritis has alcohol for its foundation.

BROWN-SEQUARD'S PARALYSIS.

This man, thirty-six years old, has a negative family history. He has never been sick before. His present illness began last July. He was at the well pumping water when the attack seized him, and he was unconscious for about half an hour. There was slight disturbance of both right and left sides, but he regained use of the right and now can use both legs fairly well. His left side still remains paralyzed. Nutrition does not seem to be disturbed; appetite is good, and there is no sign of muscular atrophy. The temperature sense is disturbed on the right side. He has no touch sense. On the paralyzed side there is increased sensitiveness and the reflexes are exceedingly exaggerated. The man is intensely emotional, and it was at first a question whether this was an hysterical or an organic lesion. We are now certain that it is organic, because the man was stabbed in the neck some years ago. He has a hemi-cord lesion—a case of Brown-Sequard's paralysis. You get paralysis on one side, and this interesting series of sensory disturbances on the other, because the sensory tracts decussate in the cord, and the motor tracts decussate up into the medulla. The treatment of this case is simply nothing.

PROGRESSIVE MUSCULAR ATROPHY.

This man, a laborer, is fifty-four years old. Previous history is negative. Family history is good. He complains of pain in the left arm and

shoulder. His pulse is 72; temperature, 97.5°; weight, 160. The sensory condition seems to be normal. His stereognostic sense is not very acute. There is distinct atrophy of the muscles of the left arm, hand and shoulder, with fibrillary twitchings of all the muscles. Associated with such an atrophy we frequently find disorders of sensation, giving rise to the clinical picture known as syringomyelia. This is a case of progressive muscular atrophy, but it differs from the ordinary form in that it begins in the left arm instead of in the right, and the thenar and hyperthenar eminences are not involved.

Gower's treatment is the only treatment of any avail in these cases. It is the hypodermic injection of nitrate of strychnia daily, beginning with one-thirtieth grain, increasing the dose daily until you see some of the evidences of physiological activity. Then drop back rapidly and begin again. The nitrate is preferable to the sulphate. By pursuing this course you can sometimes benefit these cases very much. The general health of the patient must also be looked after.

Emergency Hospital at the Pan-American Exposition.—A very important consideration in these days of expositions and world fairs is the institution of an emergency hospital system on the grounds. There are many accidents of an emergency nature which occur as a result of a large assemblage of people, and untoward consequences are sure to ensue if there is no adequate means of handling such cases immediately. At the Columbian Exposition in Chicago and at the Exposition Universelle at Paris last year, the necessity of the existence of such an institution was well demonstrated, and the success attending the same more than compensated for its foundation. The same condition of affairs will exist at the Pan-American Exposition now being held in Buffalo, New York. A splendid hospital has been erected on the exposition grounds, and it has been equipped with all modern devices for handling emergency cases. A regular staff has been appointed, including the office of resident physician at the hospital. Wards for men and women have been arranged in it. Trained hospital attendants are there ready to lend their skilled aid. An ambulance system, made up of electric ambulances, and a working force is there ready to proceed to any part of the grounds after sick sight-seers. The whole system, has been carefully thought out and promises to do excellent work. It is under the direct charge of Dr. Roswell Park, who needs no introduction from us as a competent medical man. The patrons of the Pan-American Exposition are certainly fortunate in having such an institution connected with it.

ORIGINAL ARTICLES.

BRIEFS ON THE SURGERY OF THE GENITO-URINARY ORGANS.

BY G. FRANK LYDSTON, M. D., of Chicago, Illinois,
Professor of Genito-Urinary Surgery and Syphilology in the Medical Department of the
University of Illinois.

OVERESTIMATION OF THE IMPORTANCE OF RESIDUAL URINE IN PROSTATIC AND BLADDER DISEASES.

FROM time immemorial it has been the custom of the physician, when confronted with a case of prostatic or bladder disease, in men past middle age, to immediately institute an investigation to determine the presence or absence of residual urine. Residual urine having been found to be present, the next step is to institute treatment which shall result in the systematic withdrawal of the fluid. The natural inference, from observation of this universal practice, is that the residual urine is considered to be the important element in such cases. One would suppose, from the frantic efforts that are made to discover and remove this condition, that it was the *fons origo* of all of the elderly patient's troubles. I wish to enter an emphatic protest against this rather fallacious notion and practice. Residual urine is a secondary matter. When a patient consults a surgeon before infection of the bladder has occurred, the urinary residuum is not only secondary, but of trifling importance. The danger incurred in systematic attempts at its withdrawal is so great, that no amount of benefit that can be derived will, as a rule, compensate for it. The urine is aseptic in the cases under consideration, and I believe it would be difficult to show wherein it does any great harm. The argument is advanced that unless these patients suffer from frequent and perhaps painful micturition, and a constant desire to urinate, with or without straining, and these symptoms are relieved by withdrawing the residual urine, we are forced to conclude that the latter is of necessity the cause of the symptoms.

Let us inquire into the relation of a small or moderate quantity of residual urine to increase the desire to urinate. It must be borne in mind that I am discussing now normal or aseptic urine, which exists in these patients until ill-advised efforts on the part of the physician or surgeon to evacuate it have sooner or later made it septic. The normal urinary desire is not in the lower portion of the bladder, but in the true vesical neck of the posterior urethra. This desire is not excited by the pressure of urine within the bladder, except in so far as this pressure of urine forces a greater or less quantity of the fluid into the posterior urethra, causing pressure upon the nerve filaments to urinary sensibility and exciting the urinary function. Under conditions in which residual urine exists, the

patient is advanced in age, the sensibility of the bladder is decreased, the lower portion of the bladder is pouched, forming a *bas fond*, and it is here that the residuum accumulates. This portion of the bladder is the least sensitive part of the viscus. Now, we are asked to believe that while the relatively sensitive and muscularly powerful bladder of the young subject will retain many ounces of urine without exciting urinary desire, the comparatively insensitive and less powerful bladder of the elderly patient represents the presence of a few drams or perhaps several ounces of fluid accumulated in the *bas fond*. The relief incidental to the passage of the catheter and the evacuation of the clear residual urine is, as already indicated, apparent positive proof of the correctness of the view aforesaid, and the acceptance of this clinical fact is established sooner or later naturally. As a matter of fact, however, the irritation which gives rise to the frequent urinary desire is located in the prostatic urethra, and is incidental to circulatory changes, to pressure, and irritation of the nerve filaments of urinary desire in this part. The passage of the catheter in the evacuation of the residual urine produces, by mechanical pressure and its passage through the structures which are the seat of the irritation, the same relief that would be experienced by the passage of a sound or the application of solutions of nitrate of silver. This does not occur in all cases, for it will be found that, despite the evacuation of the residual urine in many instances, the old man's troubles are increased *pari passu* with the frequency of the introduction of the catheter. This fact, however, has not appealed to the judgment of those who have believed that evacuation of the residual urine alone is the thing to be accomplished in prostatic disease. When the residual urine has become infected, as it does in the vast majority of cases, sooner or later after catheterization for its evacuation is begun, quite a different condition of affairs supervenes. The evacuation of the residual urine is now an absolute necessity, for the infected fluid bears an important relation to the urinary irritation by virtue of the constant infection by continuity of the affected mucous membrane and the frequent passage of the infected urine through the vesical neck. Evacuation of the residual urine and antiseptic irrigations are now essential. This condition is not the one at which the foregoing remarks are aimed. It is a condition, however, which might have been avoided had the aseptic residual urine not been accorded the importance which it did not deserve early in the case.

I wish to enter a special plea for attempts at palliation of the urinary irritation early in prostatic disease by sounds, instillations of nitrate of silver, and prostato-rectal massage as a substitute for the fallacious method of frequent evacuation of the residual urine. In some instances these measures will, if instituted early, retard or prevent the early development of serious prostatic disease. Where they do not accomplish the desired result, it is hardly wise for the patient to begin catheter-life, if the constitutional and renal conditions be good, and he can be induced to submit to a

radical operation. There has been entirely too much routine in the management of prostatic disease. The profession has been overshadowed by the dictum of the medical forefathers: (1) That the prostate is not susceptible to surgical treatment; (2) that hypertrophy of the prostate is essentially a senile disease; (3) that the only thing to do is to institute catheter-life as soon as the disease is discovered.

The surgeon has a right to demand the same intelligent co-operation of the general practitioner in the surgery of the genito-urinary organs that prevails elsewhere. No physician of intelligence at the present time allows his patients with ovarian tumors to go on without operation until they are *in extremis*. He recognizes that an early operation is, other things being equal, a successful operation. The reverse is true, however, in the case of the surgery of the genito-urinary organs. A man with an intractable, deep stricture or prostatic hypertrophy is turned over for operation only as a last resort, and when the notoriously inefficient, old-fashioned measures of treatment have failed; as is well known, they usually die. Cases are selected for the genito-urinary surgeon to operate on because they are in such bad condition that operation is a practical necessity. This is unfair, and a little more surgical rationalism in the study and management of these cases is demanded.

USE OF SILVER IN SURGERY.

BY EDWARD WALLACE LEE, M. D., of St. Louis, Missouri.

SILVER in its various forms has become an established material in wound-treatment. The elder Cr  d   was, I believe, the first to establish the germicidal value of silver in the treatment of ophthalmia neonatorum. The younger Cr  d  , of Dresden, has made most interesting experiments and arrived at very satisfactory conclusions regarding the use of silver and silver salts in wound-healing.

I had the pleasure of spending quite a time this last spring with Cr  d   in his hospital at Dresden. His first remark to me was that his hospital was not in a condition for him to do aseptic surgery, although he believed in it thoroughly, but was under the circumstances forced to do antiseptic surgery, perfect cleanliness being adopted so far as possible. He used the city hydrant water without being sterilized. The only antiseptic outside of silver and its salts was the bichloride of mercury, which was used for washing the patient, the hands, etc., instruments being cleaned by immersion in plain water. Cr  d  's results, I must say, are as satisfactory as those of any surgeon I have seen, which establishes beyond a doubt the truth of his theories regarding silver.

The following are some of the silver preparations used by Cr  d  : Pure metallic silver, which is non-irritating and distinctly germicidal.

The court plaster made in Dresden has a partial coating of metallic silver. A solution of metallic silver in distilled water is a non-irritating and non-toxic fluid. Silver gauze is made by soaking ordinary muslin in a strong solution of metallic silver. Silver lactate, a white, odorless powder, which can be kept unchanged in a dark bottle, one part of this being soluble in fifteen parts of water or albuminous fluid, in a strength of 1-1000 it kills streptococci and staphylococci in five minutes. Cr  d   prepares his cat-gut (or, more properly speaking, sheep-gut), after cleansing it in the ordinary way, by soaking it for one week in a 1-200 solution of silver lactate, drying it and placing it in alcohol. It is then ready for use. He prepares silver sutures and rubber drainage tubes in the same way. Silver citrate is a light, colorless, non-irritating antiseptic powder, it being less soluble in water than the silver lactate; an aqueous solution will kill ordinary germs in ten minutes. This solution is used for irrigating wounds and cavities. The silver lactate powder is most valuable as a dusting powder for flesh or granulating wounds. The silver ointment (*unguentum argentum Cr  d  *), made with the metallic silver or silver citrate is a most valuable remedy in cases of acute or chronic sepsis. It should be applied on healthy skin, the part first being thoroughly cleaned. It is readily absorbed, and causes rapid destruction of septic microbes acting in the system. This I have seen demonstrated a number of times in cases of puerperal sepsis and erysipelas. It is a most valuable agent in cases of acute or chronic orchitis and epididymitis. The Cr  d   gauze is generally applied first over the wound, after which other gauzes and dressings can be applied. It is most valuable in packing suppurating wounds or cavities. It makes the best first layer in the "Mikulicz drain," as it has a powerful antiseptic action on any suppurative surface.

Sonnenberg, of the Moabit Krankenhaus, Berlin, always uses this gauze for his drain tamponade in suppurating appendicitis, and it is wonderful to see its action; what was at the time of operation a foul-smelling, suppurating cavity, in forty-eight hours becomes a clean, healthy, granulating surface. Sonnenberg does not irrigate these abscess cavities, but mops them out with silver gauze (dry), then applies a bag of silver gauze which is packed with ordinary gauze. Good Cr  d   cat-gut is, I believe, the best form of cat-gut that we can use. It is strong, not too readily absorbed and decidedly and powerfully antiseptic. I have had considerable experience with Cr  d   cat-gut long before I visited Cr  d   in Dresden. That which I used was put up in sealed envelopes, sterilized by dry heat in the laboratory of the Ramsey County Medical Society, under the direction of Edward Boeckmann, of St. Paul, Minnesota, who followed out carefully the directions of Cr  d  , adding formalin to the alcohol.

I cannot imagine a more desirable suture or ligature than the properly prepared silver cat-gut, being strong, elastic, not too readily absorbed, does not rot with age, but grows stronger, and withal is *antiseptic*. I have used this silver cat-gut of Cr  d  's most everywhere that suture or ligature

was indicated—the ligation of large pedicles, in hernia, in peritoneal suture, intestinal suture, on the perineum and in the cervix uteri, in fractures—and to use in fractures of patella it is ideal. A case in point: Horizontal-bar performer fell from his bar while making the giant swing, striking on his left knee on the hard stage, producing a compound transverse fracture. I saw the case within fifteen minutes after the accident; there was a clean, lacerated wound extending into the fracture, which was complete. I washed off the parts with soap water and a 1-1000 bichloride solution, then with sterile water, and then with one per cent. sterile boracic acid solution. All clots removed, and all lacerated tissue cut away; the fractured ends were brought into normal position and held with hooks until I completed my suturing. The periosteum of the patella was united with continuous silver cat-gut. The rupture in the quadriceps extensor and ligamentum patellæ was also united in the same way. The external wound was closed with silver cat-gut without draining. The limb was put on a plaster cast and was not again dressed for three weeks, at which time absolute union of the soft parts had taken place without sign of suppuration. In a little over two months the man resumed his bar performances. Karl Lonstine, of Hamburg, has treated quite a number of fractures in the same way with most gratifying results. I have used silver cat-gut on ununited fractures of the humerus with good results. I believe that this form of suture can be used in any place where the strain is not required for a long time. Silver foil is a most excellent protective and antiseptic dressing. Bacteria will not grow in a medium placed on silver foil. In recent uncomplicated inguinal hernia the Bassini operation can be performed, using silverized cat-gut and most perfect results obtained. This material can be used on any hernia where the strain is not going to be too great.

Silverized silk has also been used and makes a most excellent ligature and suture; but the chemical process necessary for its preparation renders it friable and it loses its durability.

Silver wire has for years been used in surgery and will continue to be used. As a suture in hernia operation, where there is going to be a strain on the parts, it is justly entitled to first place. Silver wire properly applied becomes encysted and does not act as a foreign body. It does not cause suppuration. If the free ends of a silver wire suture are not properly taken care of, it will act as an irritant. I have used it with excellent results in inguinal, femoral and ventral hernias. In one case of ventral hernia of over forty years' standing, where the opening was large enough to admit my fist, I closed the wound with twelve silver wire mattress sutures. The operation was performed in 1888; in 1897 the old lady died of acute pneumonia; post-mortem revealed my sutures intact and as bright as the day when they were applied. I have also observed most excellent results in the treatment of ununited fractures by the use of silver wire. In vesico-vaginal fistulæ, lacerated perineum and lacerations of the cervix uteri, silver wire is in many cases the best suture material, especially

where we are dealing with parts that are not absolutely aseptic. A. M. Phelps, of New York, used large quantities of silver wire in large hernias. He uses the wire for its mechanical support, putting in from twenty-five to one hundred feet; and in one case he used three hundred feet. He claims that there is no disturbance caused, and that by its use he is able to obliterate the inguinal canal. He places a mass of wire under and over the transversalis fascia, thereby securing a support that will not stretch as the tissues sometimes do, causing relapse.

Several cases of aneurism have been treated quite successfully by the introduction of silver wire. My personal experience in this matter has been limited to two cases of aortic aneurism. In neither one was the result favorable. In conclusion, I can state emphatically that the proper use of silver in its various forms has many indications in the field of surgery, as it is non-toxic, non-irritating, and a powerful antiseptic.

Linmar Building.

"POWDER MONKEY."

By J. J. M. ANGEAR, A. M., B. S., M. D., of Chicago, Illinois,
Professor of Nervous and Mental Diseases and Clinical Medicine, Illinois Medical College.

AT THE close of one of Mr. Beecher's oratorical efforts he was asked: "How do you do it?" He replied: "I don't do it. I simply take what this little fellow (putting his finger to his head) gives me, and give it out to the people; that is all I do." This "little fellow" was an all-important and a very busy "little fellow," bringing forth newborn and undying thoughts of love and sympathy.

To take a naval figure: The magazine is the memory; the gunner is the speaker; the gun, the physical organs of speech; the "powder monkey" is the person whose duty is to supply the gunner during action with ammunition from the magazine. This is the "little fellow" up in Mr. Beecher's head supplying him with thoughts.

There is a psychological something—for want of a better and more elegant term—we will call the "powder monkey," whose duty is to bring the thoughts stored in the psychological magazine (the memory) and deliver them to the psychological gunner (the speaker), who, with more or less accuracy of aim and force of logic, bombards the citadel of his opponent.

This "little fellow" (the "powder monkey") is supposed to be perfectly familiar with the individual, intellectual magazine and its contents. During public speaking his ability is greatly taxed to deliver the required thoughts in the order, and as fast, and no faster, than the emitter (speaker) needs them. It is not simply quantity that is required, but the right kind and at the right time—*seriatim*.

The emitter (speaker) is able to do some assorting at the time, throwing back some thoughts and holding them for future use, and reaching after other thoughts for immediate use.

Every public speaker or good story-teller understands this well. He

knows that there are times when he may have selected and arranged them *seriatim* beforehand, but they will not come; he cannot command them. Where is that "little fellow," the "powder monkey?" Again, there are times they are on hand and clothed in their gayest attire. The speaker himself is astonished; literally, all he does is to open his mouth and throw out just what that "little fellow" gives him, and the audience is regaled and refreshed with the eloquence of thought and word. That "little fellow" is well and active. The "powder monkey" enters into the spirit of the battle.

In some forms of mania the "little fellow" is too active and reckless. The emitter (the speaker) is buried in his own thought; they are thrown in upon him in a higgledy-piggledy manner. His thoughts are mixed, confused, incoherent, because the emitter is not able to send out the thoughts in a consecutive order to be intelligent, nor fast enough to keep his desk clear; hence, he is said to be insane.

Doubtless in some persons there is a natural defect in this matter; if so, that individual will never be a good story-teller or lecturer. Public speakers, like poets, are born, and not made.

On resuming my college duties after an attack of cerebral thrombosis, I discovered that I was obliged to be very deliberate in my speech—not *staccato*—simply slow, steady, uniform. If I attempted to speak faster, momentary aphonia would occur, as if a cog or two had slipped in the wheel. Some might say that it was aphasia, which may be, in part; but I am confident that it was more aphonia, for as soon as I came down to my former deliberate pace all was well—no loss of words—but the gun would not go off.

Again, *common* technical terms were slow in coming, as neuritis. If they were not delivered in time, the common phrase—inflammation of the nerve—would take its place. This would be so quick that the audience would not recognize it. It annoyed the speaker. The audience does not know all that goes on behind the curtain.

Another and the most embarrassing difficulty was that the "powder monkey" and the emitter were not "Siamese Twins," working together and at the same time, as they should and do in a normal condition. They appeared to be two separate entities that did not and could not work at the same time; but the speaker was obliged to deliver the thoughts on hand and then wait for another batch of thoughts to arrive, and when the emitter had sent them out, wait again, and so on.

It seemed as if the lecture was chopped up into pieces instead of, as it should be, a steady and uniform flow of thoughts. There was no lack of thoughts, no lack of coherency—simply the thoughts were not delivered to the speaker in time. This was painfully embarrassing to the speaker, so painful that an inexperienced speaker would fail. This, again, was not noticed by the class.

Where does this "little fellow" reside, and by what name is he to be known?

ETIOLOGY AND TREATMENT OF DIABETES MELLITUS.

BY FRANK M. FLOYD, M. D., of St. Louis, Missouri.

IT HAS been my fortune to have several cases of diabetes mellitus under my care during the past three years. I have treated them to the best of my ability, and watched them become better or worse—usually the latter—until within the last year and a half. During the past eighteen months results have been far more satisfactory than ever before.

The term diabetes mellitus is used to define only a certain stage in a train of pathologic phenomena. The stages preceding diabetes mellitus rarely come under the physician's eye, and I am of the opinion that there are few men to-day who are capable of stating, with any degree of certainty, that any present set of symptoms will later be transformed into that set called diabetes mellitus. I know of no other condition so common in which the minority symptoms are as little known or so seldom recognized. The reasons for this state of affairs, I believe, are: first, that the symptoms are such that the patient gives them little attention; and second, that but a short time usually elapses between the first set and the appearance of the second set, called diabetes mellitus. As the knowledge of the first symptoms increases, the matter of cure will be greatly simplified, for even to-day we are moderately certain of a cure if the patient presents himself before the disease is very far advanced. To me the most interesting part of the study of this disease is its primary cause. In the cases examined and treated by me, I have used every effort to ascertain, in each instance, the first symptoms noticed by the patient and any preceding events of physical or mental importance to him. I have found that the patient, in many instances, gave a clear history of some event that caused him to be very greatly disturbed mentally, and that very soon thereafter the symptoms of the diabetes became sufficiently prominent to attract his attention. The history and symptoms of a few cases made them appear to be of possible bacterial origin; a few others exhibited the symptoms soon after a great gain in weight; but a history of great mental disturbance just before the first noticeable symptoms so greatly overshadowed all the others, as to make them insignificant in comparison; so marked was this that, in some instances, a pronounced case of diabetes mellitus developed within a very short time after the mental disturbance.

Suspense and great anxiety seem to be causes, rather than great joy, grief or fright. For instance, I have two well-marked cases in business men (both Hebrew), following close on the heels of business failure with the attendant mental strain. Three other cases in which the symptoms became apparent to the patient soon after several days' worry and acute mental strain over family or financial matters have recently come under my notice. Whether or not the above cited causes induce vaso-motor paralysis, I cannot say, but it seems probable. It is my opinion that close ob-

servation will reveal that a very heavy percentage of cases of diabetes mellitus can have their origin traced to the causes here set forth.

In my experience I have found that while dietary limitations decrease the amount of sugar, I have not been able to see that the general health has been markedly improved, and in some instances, the withdrawal of sweets, and other restrictions of diet have not materially lessened its excretion.

Until recently, I used in various forms and combinations all the drugs most recommended, having varying success, the record as a whole being not at all flattering, but the best results being obtained from codeine and arsenical preparations. Some two years ago my attention was called to arsenauro as a therapeutic agent for this disease, and as arsenic had on the whole given better results than any of the other drugs, I gave it an extended trial. The results in all cases were better than those with codeine or arsenic, and in the probably neurotic cases cures were effected in nearly every instance. In almost every case the amount of sugar became noticeably lessened within a period of ten days to two weeks; one case was practically cured in two months, and in others repeated tests showed no trace of sugar in from three to four months. The general health improved in every instance, the drug in no case causing any untoward disturbance, either local or general. In emaciated cases an increase in weight and a better color, due to a marked increase in red blood corpuscles, was noticed even before any marked diminution of the sugar occurred.

In conclusion, it may not be amiss to say that at least two of these cases first presented themselves to me on account of having been refused life insurance because of sugar in the urine, nor is it amiss to add that within the last few months both cases have been accepted for policies of good amounts, no sugar being found after repeated tests, the writer not being the examiner in either instance.

The prognosis of heart disease in children is considerably better than in adults. The tissues of the heart, and of all other organs, are in children more elastic than in adults; the limit of growth has not been reached and there is a natural tendency toward the production of normal structures.

Trousseau thinks that the appearance of iritis in a case of syphilis indicates a severe form of the disease, and a profound infection of the organism, whether it assumes the form of iritis, irido-choroiditis, retinitis or optic neuritis. In mild syphilis, ocular diseases are only occasionally observed, and are of short duration, yielding readily to treatment. Such is also the case in hereditary syphilis, in which the virus, being an attenuated one, does not beget ocular disease. All cases of syphilitic iritis should be carefully watched and energetically treated.

REPORT OF CASE OF PRIMARY LUPUS OF TONGUE.

BY JOHN C. MURPHY, M. D., of St. Louis, Missouri.

IN CONSIDERING grave pathological lesions of the tongue we have to consider, principally, three varieties, namely: cancer, tuberculosis and syphilis. There are other diseases of the tongue besides these mentioned, but they are usually not of sufficient magnitude to endanger life. Of the three named, cancer, which is of the epithelial variety, is, of course, of the most importance. Tuberculosis is, however, almost as vital an issue. Primary syphilis of the tongue is a rare disease. It is with the differential diagnosis of the various conditions named that I wish to impress you, as it is only by early recognition and prompt action that we can hope to avert the frightful consequences of allowing operable cases to go unrecognized, as it is only in their incipency that we can hope to offer a favorable prognosis in epithelium or primary tubercle of the tongue. That such cases do pass through the hands of some medical men without recognition, I am prepared to prove by the history of the case I present to you this evening.

In attempting a diagnosis we must consider the history, age, sex, general condition of patient, duration of disease, etc. Syphilis of the tongue is usually of the tertiary variety, and is accompanied by other evidence of the disease. It occurs at all ages after puberty, is usually well-defined, and the glandular involvement is more marked; and, lastly, this type of ulcer yields to specific medication. It is between localized tuberculosis and epithelioma that the surgeon is most liable to err. But it would seem, in this age, when we have such a valuable aid as the microscope at our command, that we would press it into service when our own diagnostic skill had reached its limit. But, alas! how many men there are who are either too arrogant or ignorant to avail themselves of the many new aids to knowledge that science is constantly providing us with. The patient from whom this specimen was removed was in the hands of a certain medical man for weeks before I saw him, who treated the ulcer on his tongue as a simple sore, using silver nitrate and other caustics. The only result obtained was to stimulate the disease to increased vigor.

We should look with suspicion on all ulcers of the tongue that do not heal by the ordinary means, irrespective of age. Primary tuberculosis of the tongue is not of frequent occurrence, and, in the absence of tuberculosis in other organs, a mistake in diagnosis may happen. But it is just in such doubtful cases that the microscope is of such value. The macroscopic picture presented by tubercle and cancer may so closely resemble as to render a differentiation almost impossible.

The specimen I present at this time is from the tongue of Mr. S., aged thirty-three years. He has enjoyed perfect health up to four months ago,

with the exception of an attack of gastritis at the age of twenty years, from which he made a good recovery.

About four months ago a small nodular mass about the size of a shot developed on the edge of his tongue a little to the right of the center. It grew rapidly, became indurated and broke down, forming an ulcer. He consulted a physician, and was treated as I have mentioned in the first part of my paper, and was assured that the trouble was of little moment. He consulted me on March 17th of this year, at which time the ulcer was quite extensive, and the induration was rapidly spreading. Pain was also a marked symptom. On account of the patient's age and family history (his mother dying of tuberculosis, and her sister of cancer of the breast), I was a little in doubt as to the character of his trouble. I presented the patient to Dr. Emory Lanphear, who was inclined to the belief that it was probably malignant. Dr. Carl Fisch made a microscopic examination from the diseased area, and was surprised to find that instead of epithelioma he had rather a rare form of primary lupus, resembling in character the same disease as found on the skin. I say "primary," as a careful physical examination does not reveal any evidence of tuberculosis elsewhere.



LEITZ, 2, 3.—Tuberculous granulation tissue and hypertrophic epithelium.



LEITZ, 2, 6.—Small tubercle. with giant cell between muscle fibers.

This case was operated by me at the Baptist Sanitarium, March 25th. I excised the diseased area, going widely into healthy tissue. The contour of the tongue was partially restored by bringing the cut surfaces together with interrupted silk sutures.

I do not look upon the prognosis in this case as particularly bright, in spite of the fact that all the infected portion was "apparently" removed, as the disease is liable to be revived in the form of a pulmonary oriliary tuberculosis:

The principal object I have in presenting this specimen and the accompanying remarks is to emphasize the necessity of early recognition and the seizing of the golden opportunity for operation in the incipient stage of malignant and tuberculous disease of the tongue, and at a time when we are warranted in holding out a reasonable hope of the disease never returning.



SCIENTIFIC MISCELLANY

By LAWRENCE IRWELL, M. A., B. C. L.

"Whenever one attempts to rise above the dead level of commonplace life, instantly the social screw begins to work, and down is brought upon him the tremendous weight of the socio-static press, and it squeezes him back into the mire of mediocrity, frequently crushing him to death in his bold attempt.—Boris Sidis, Ph. D., in "The Psychology of Suggestion," p. 312.

Carpets and Dust as the Agents of Disease.—Dust being now recognized as one of the most efficient vehicles for carrying disease germs, I think that the broom and the carpet-sweeper must be regarded as able assistants in the propagation of phthisis, as they send the dust into the air, where it is diffused by whatever breezes may be blowing around. The energetic lady, who has covered her head, but has omitted to protect her nose and mouth, digs the dust out of the carpet and stirs it out of the quiet corners where it has accumulated, and where it is doing comparatively little harm. After charging the air of the room with this living dust she conveys the residue to the yard, and the wind distributes it along the street. Then the sweeper, drawn by a couple of mules, comes along and carefully transfers this deadly waste from the road to the air, with the result that we inhale phthisis in concentrated form every day. The real wonder is that pulmonary diseases are not much more prevalent.

The broom, instead of serving any hygienic purpose, is one of the causes of the maintenance of organic dust in the air of the large cities of the world, and as such is to a great extent responsible for the spread of phthisis. The carpet is a breeding-ground for micro-organisms, many of them pathogenic, necessitating the use of the broom and the carpet-sweeper, both of which could be dispensed with if we could only make our womenkind understand the elementary principles of hygiene.

There is only one safe way for procuring the necessary cleanliness of the floors of the houses and the streets of cities, viz.: by the free use of water and mops in the rooms, and by the employment of sprinkling wagons on the streets. All floor coverings of the house—and all city roads—

ought to be so constructed as to facilitate the continual use of water—that is, if we want to fight phthisis in earnest.

The Food of Prehistoric Man.—An English surgeon, who is also a dentist, Mr. Charters White, in examining some skulls dating back from the stone age, noticed that several of the teeth, although quite free from caries, were thickly coated with tartar. It occurred to him that it would be possible by a rough analysis to identify any particles of food which might be imbedded in this natural concrete, and so reveal the character of the diet of prehistoric man.

Dissolving the tartar in weak acid a residue was left which, under the microscope, was found to consist of corn-husk particles, hairs from the outside of the husks, spiral vessels from vegetables, particles of starch, the point of a fish tooth, a conglomeration of oval cells, probably of fruit, the barblets of down, and portions of wool. In addition to this varied list there were some round, red bodies, the origin of which defied detection, and many sandy particles. These mineral fragments may have been attributable to the rough stones used in grinding the grain, and would account for the erosion of the masticating surfaces, which in many cases was strongly marked. This inquiry into the food of men who lived not less than four thousand years ago is a matter of great interest.

The Bread Question.—Referring to the question of white *versus* brown bread, discussed in the *Miscellany* for March, Dr. Lander Brunton's report may be found in the *British Medical Journal* of November 5, 1898, p. 1453.

The Real Character of the Pearl.—The presence of pearls in the shell of a mollusc was attributed in ancient times to congealed drops of dew or rain; and Pliny has left an elaborate account of the manner in which the phenomenon is brought about. Later investigations have, of course, given a more rational explanation for the occurrence of these ocean gems; and the common one is that the nucleus of the pearl is a piece of some foreign body which has got within the shell, and which the mollusc is unable to remove, but covers with layers of nacre, in order to reduce the irritation which its presence would necessarily cause. But, according to a paper recently read before the Paris (France) Academy of Sciences, by Mr. Leon Diquet, there is a distinction between fine pearls and these intrusive bodies coated with nacre. Moreover, he says that the latter have not the fine iridescence of the true "orient" pearl. The genuine pearl, he holds, has no connection with the shell itself, but is a pathological calcification, and seems to arise from parasites. It begins with a small sac of liquid, which becomes gelatinous and calcifies in a series of concentric layers, while at its center may be found a cavity holding organic matter, the remains of the parasites which produced it. If a pearl is a sort of carcinoma of a bivalve, it appears rather foolish to regard it as a

precious gem. Nobody looks upon it as a normal growth, and the idea of wearing a pathological excrescence of a mollusc as an ornament reminds one of barbaric times.

Evidences of Human Evolution.—The little fold of conjunctival tissue which may be found upon the inner side of the human eye is a remnant of an ancestor—probably a reptilian ancestor—which possessed a complete third eyelid, known as a nictitating membrane. In the horse, the remnant, the *plica semilunaris*, is sometimes sufficiently developed to interfere with the animal's sight. The third eyelid in a complete form may be seen in birds, and the eagle is said to look at the sun through it, which leads one to suppose that it must be transparent to its owner. Whenever one finds the third eyelid fully developed and functional in a reptile, it is almost a certainty that the possessor of it has not the power of moving the upper eyelid, and consequently the cleaning of the eyeball is delegated to the nictitating membrane.

Another example of human evolution is the *appendix vermiformis*, which some surgeons so dearly love to remove. It is the remnant of a herbivorous ancestor—an animal requiring, as all vegetarian animals require—an extended hollow sac to delay the passage of food, which is thus subjected to a lengthened process of digestion and absorption. When man's predecessors became flesh-eaters, this long sac ceased to be an advantage, and those individuals which were born with a limited cæcum had a better chance of surviving in the struggle for life than had those possessing the ordinary cæcum of the herbivora. As a consequence, man has finally developed, by means of natural selection, the present anatomical condition of the cæcum, in which the terminus (the appendix) has not grown in proportion with the rest of the sac. I know of no objections to this explanation, which I consider absolutely correct; but, in any event, it is more rational than the hypothesis that the appendix was placed in its present position by Providence in the interest of the surgeons.

In addition to man and the anthropoid apes, one other animal is blessed with a vermiform appendix—the wombat, an Australian marsupial.

Insurance Companies and Causes of Death.—I have before me an interesting book, "The History of the Prudential Insurance Company," which contains some useful information. But, on page 310, I find some of the errors against which I have been protesting for years. In order to use mortality statistics with intelligence, the names of the diseases which have caused death must be given. The names of the symptoms, such as jaundice, are valueless to anybody who wishes to compile accurate death returns. The mortality table of the Prudential Insurance Company giving the "thirty principle causes of death" contains "convulsions" and "dropsy," both of which are symptoms. It also contains "Bright's dis-

ease." If this term is intended to include all forms of inflammation of the kidneys, the one word "nephritis" should be used. Upon the other hand, if the term "Bright's disease" means simply that the urine of the deceased contained albumin, the information is insufficient, because it does not indicate the cause of death.

Diabetes mellitus does not appear among the thirty principal causes of death given by the Prudential Company. But, apart from all questions of improved diagnosis, I have reason to believe that it is on the increase. So little appears to be known of the pathology of this disorder, that, for statistical purposes, it ought to be put in a class which includes no other disease, except that uncommon complaint diabetes insipidus. I understand that diabetes mellitus is now believed to be in some way connected with the medulla. At any rate, "a center has been demonstrated in the medulla which at least in part controls the activity of the kidneys."—N. S. Davis, Jr., in Hare's *Practical Therapeutics*.

An Exceptionally Low Death-Rate for a Large City.—Thanks to the efforts of Dr. Ernest Wende, the able Health Commissioner, the death-rate of Buffalo, New York, is now lower than that of any place of its size in the world. The population, according to the United States census of 1900, was over 352,000, and the mortality rate last year was 14.19 per 1000. After considerable opposition Dr. Wende has induced the city fathers to pass an ordinance prohibiting spitting in public places; but, in order to protect the supposed rights of the individual, streets and sidewalks are excluded from its operation, in spite of the Health Commissioner's protest.

I contemplate opening a school of hygiene for aldermen and politicians generally; the number of pupils ought to be large.

Mammary Glands and Teats of the Male.—The great variation in the position of the teats and mammary glands of many animals deserves attention, because it enables us to satisfactorily explain the existence of so-called supernumerary mammary glands and teats, which occur in human beings of both sexes. (The term polymasty is applied to the former condition, polythely to the latter.)

The increase in number, in both men and women, may be regarded as a return to a primitive condition, in which many glands were developed and many young were produced at a birth.

But how are we to account for the presence of such pronounced vestigial organs as the teats of the male human being? It is usually considered that they are inherited from the female, and it is possible that this explanation is correct. But when we find that in the monotremata, which are only found in Australasia, the mammary glands are almost equally developed in both the male and the female, it seems not improbable that there

was a period when both sexes may have taken an equal share in the rearing of the young.

It is certain that a functional condition of the mammary glands does occur in men. Humboldt records a case in which a man at the age of thirty-two was left in charge of a sucking child by the death of his wife. Not knowing how to rear it he, in despair, pressed it to his own bosom; and it is asserted that hypertrophy of his breast, with milk secretion sufficient for the rearing of the infant, was thereby induced. This story seems improbable, but it cannot be regarded as without foundation. Boys at the period of puberty do occasionally produce milk from somewhat swollen breasts; and male goats have been known to give milk which, on chemical analysis, was found to be quite as rich in casein as ordinary milk. It is said that castrated rams have been known to possess functional mam-mæ, and although I know of no reliable authority for the assertion, I do not suppose that castration would have any influence upon such an abnormality in the male.

The teats of some male bats are remarkably developed, but it has not been shown that they give milk. Further study of these bats is desirable.

A solution of quinine sulphate in glycerine is a good preventive for insect bites. Whether the effect is due to the toxic action of the quinine, or to the fact that insects may object to its taste, is not clearly established.

A Brazilian physician claims to have cured several cases of leprosy with rattlesnake poison. Several cases of leprosy supposed to have been cured by rattlesnake bites led him to make investigations.

Senile pruritus is readily relieved and frequently cured by simply rubbing the affected skin briskly with a soft brush until the overgrowth of superfluous, ill-nourished epithelium is removed.

Klebs-Loeffler bacilli are found in the throats of about eight per cent. of persons who have been exposed to diphtheria, but who have not contracted the disease. Experiments have also shown that the bacilli may be found in about one per cent. of unexposed persons.

Plaster of Paris bandages may be removed by the following simple method: Soak some cotton-wool in hydrogen dioxid; then with this moisten the splint down its entire length for a width of about half an inch. When it is thoroughly soaked, the plaster will be found in the same condition as when first put on, and the bandages only have to be cut with a pair of scissors, without any injury to the patient or any trouble whatever.

CORRESPONDENCE.

EL INSTITUTO MEDICO MODERNO,
CALLE DE LAS HUERTAS, 10, MADRID, SPAIN.

DIRECTOR, DR. J. B. BUSDRAGHI.

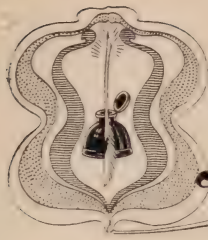
EDITORS INTERSTATE MEDICAL JOURNAL, St. Louis, U. S. A.

Gentlemen:—I have read with much interest your valued editorial on "Why is not American Medical Research Recognized Abroad?" and have found in it many very just points. As a European medical man I should like to make a few remarks in this connection. Europeans find it hard to realize that in America there has arisen a great people with great cities; that new life has been imbued into these people, and that a medical profession is growing up of which the American people may well be proud.

It is lamentable that the thrift and value and enterprise of the American medical journals is not recognized abroad. It is also a pity that the great leaders in medicine in America are but little known by their colleagues beyond the Atlantic. We seldom see quotations from American journals in European journals, and if any do by chance appear in them, they are meager and indefinite and misleading, giving the chance reader the impression that all work in the States is superficial and unworthy of credence. It is deplorable that the European medical man fails to recognize the practical basis upon which the American works and the practical phase which he gives to theoretical considerations. It is an established fact that American hospital arrangements are marvelous, and deserving of great praise from us. It is also an indisputable fact that the American has given the world the best in the surgical instrument and apparatus line. Many chemical and pharmaceutical products of inestimable value are brought out in America, and these, too, meet the same fate as the other medical points referred to: they are unknown abroad.


To attempt in a measure to remedy these defects in the European system, I have founded an institution here in Madrid, under the name of "El Instituto Medico Moderno." This institution will have for its object the exposition of medicinal products, their importation and sale. At this institution I shall have all chemical products made in various countries, including America, also new and up-to-date surgical instruments. The profession is solicited for correspondence.

March 1, 1901.



Personal Comment

BY
WILLIAM PORTER, M.D.



SIR MORELL MAC KENZIE.

(PUBLISHED BY REQUEST.)

A LITTLE TRIBUTE AS A SMALL RETURN TO A LIFE THAT HAS
MADE, TO ME, ALL LIVES MORE LOVABLE AND LIFE ITSELF
BETTER WORTH THE LIVING.

TO WRITE of a great man is a great responsibility; to write truly of such a one to whom we owe much is a great trust. I cannot even at this time, years since I knew him, speak of Sir Morell MacKenzie without emotion. Why should that be thought strange! He was all that a preceptor and counselor could be; but more than all that, I learned to know him and to love him. Even then he had his trials, unknown to many, and I understand better than most could what he meant when in my house in St. Louis he said: "I wish you had remained in London, but you are happier here."

It is not my intention to make any apology for him or his acts; none are needed. Those who knew the man understood his work. Those who did not know him could never fully understand. In the first place, from a full knowledge of Sir Morell extending, by personal acquaintance and afterward by correspondence, for over a decade, I unhesitatingly say that he was singularly honest. His proud Highland blood forbade explanation, and though he chafed under unjust criticism and jealousy he gave no sign.

His uncompromising determination made him appear severe and dogmatic, yet he was ever just and always kind. He felt that the hands of the leaders of the old routine were against him. He was a specialist in a new department. It is true he had taken the degrees of the College of Physicians, and of the London University, and had written the prize essay of the former, and held many positions demanding skill and hard work, but was he not fast becoming a public favorite in an untraveled road in which he was a pioneer? Had he not moved somewhat out of the rut of the average medical man, and with independent thought and decisive action was proving a power among the powerful—a force where forcible lives were making of the Victorian age a new era?

It was this man, honest, active, thoughtful, aggressive, and self-poised who carried deep beneath the surface, but none the less warm for all that, a heart. I have seen the tears in his eyes after a recital of suf-

fering—some one else's suffering—and a minute after the lines of the clear-cut mouth and determined chin would grow more distinct and positive, as he encountered some new obstacle or opposition.

His was not a gentle nature except among those whom he loved. The chieftain's blood in his veins flowed hot and strong. He had no use for the rapier, but his words fell heavy and fast, like the broadsword of his fathers, when he led the charge on those who thought through him to arraign the truth. Yet this same ardor and intensity, under the most perfect control, made him the great authority in his department, and stamped him as one of the advanced thinkers and best logicians of his profession.

I need not speak of his scientific work. Few, even of those who hated him—I use the word advisedly, for such there were—denied his ability or the value of his writings. His great work on the upper air passages is yet a court of last resort. He had the faculty of being eminently practical. His deductions were ever tending to the exact, and he was always reaching out for "more light." Such, to my mind, biased it may be, but ever loyal and true to him, was the man who was called by royal command to leave his well-won place in the heart of London, and of England, and of Englishmen, and join his fate to that of the unfortunate Frederick.

Were I to be asked which of these two leaders was the greater sufferer, I should hesitate to answer. I believe it was MacKenzie. Placed in a wrong position, his hands tied, his words misquoted, his actions criticised, he saw himself drifting by force of circumstances toward a whirlpool of censure and reproach, the like of which is not found in the annals of our guild. All this time he was the kind, attentive, efficient physician and friend of the dying emperor. His position was peculiar. The German specialists had said that Frederick had incipient laryngeal cancer. MacKenzie, at his first examination, said the case was not proven and removed a small piece for examination. In his protocol of November 9th he gave as his opinion that "the disease was cancer, pointing out, however, that in the absence of microscopic evidence, such a diagnosis could not be made with certainty." Professor Virchow reported that there was no such evidence. Even then MacKenzie wrote me that "the larynx presented all the clinical appearance of malignant disease."

After the condition was sufficiently determined to found a positive diagnosis, the question of extirpation was discussed. Gerhardt had attempted removal of the growth by the cautery, and it was now a question between palliative and radical measures. The records showed that extirpation lessened rather than prolonged life. The average duration of life in cases of laryngeal cancer is two years where palliative treatment is followed, but far less where radical measures are adopted. Besides, the emperor, after hearing the unvarnished statements in the case, chose for himself.

MacKenzie proved himself either a knave or a martyr. To admit the

former is an insult to human judgment. I have just finished reading again, "Frederick the Noble." The book may not appeal to all, for it is the protest of a strong man wounded unto death in the house of his friends, and it has in it much of bitterness and just resentment—yet it has the ring of truth and honesty.

It was claimed by the College of Physicians and Surgeons that MacKenzie disregarded the demands of professional courtesy towards his German colleagues. Not so. What could be more generous than his praise of Hahn, Krause and others, and was he not to say a word when denounced by Bergmann and Gerhardt and villified by the press? Was there to be no answer when requested by members of the royal household to set the matter right before the public? More than this, is not a man's honor and his very life dearer than professional etiquette, or unwritten codes?

Censure from a recognized authority means much in England. Patients still crowded to see him; he was honored, knighted, and more than ever the idol of the populace, but MacKenzie was proud. The interdiction of his book in Germany and the action of rivals at home galled him. He had been under a great strain during his long attendance upon the royal Frederick, and now the public and private demands upon him and the grind of criticism and opposition left him little rest. He wrote me just before the end came, in his Christmas letter of '91: "I am so tired." I could hardly imagine MacKenzie saying that.

In the quiet church-yard at Wargrave-on-the-Thames lies the form of one who, more than any other man, was my model and inspiration, not only in professional excellence, but in nobleness and goodness and beauty of character. It matters not to me what others have thought—*I knew him*.

May I be permitted to place "this spray of Western pine" among the ivy leaves and laurel that cover his tablet:

The Master rests. After the day of toil
An urgent message came to him, and he,
Well used to sudden calls, in quiet haste,
With kind "good-night," went out and all was still,
And now his work's done; to him no more
Will come the suffering ones and those who need
The helping hand and words of goodly cheer.
His last response completed all his work.
O strong and gentle heart, ours is the loss
Who knew thee well and, knowing, loved thee more,
Ours is the loss and thine the great reward,
We crown thee victor, O thou kingly dead!

3886 Washington Boulevard, St. Louis.

MEDICAL TREATMENT.

Infantile syphilis may be treated by an inunction composed of diachylon plaster 3000 parts, calomel 1000 parts, and castor oil 300 parts. This plaster does not usually cause any softening or inflammation of the skin. The plaster is applied at different sites, and left in place for a week. There is rapid and continuous absorption, without digestive disturbances and suspension of absorption as soon as the plaster is removed.

Deep-seated inflammations of a chronic nature will often show rapid improvement under the use of the following combination: Icthyol, 45 grains; lead iodid, 45 grains; ammonium chlorid, 10 grains; petroleum, enough to make one ounce. It should be applied by rubbing upon the inflamed parts.

The treatment of strangulated hernia by local applications, prior to a cutting operation, is worthy of note. Recently an American surgeon reported a case of this nature in which the patient, a negro, accustomed to the use of tobacco, was treated by the application of a strong tobacco poultice to the affected region. After a short time the patient evinced signs of considerable systemic prostration; but the hernia was easily reduced. Ether compresses may be used, it being claimed that the refrigeration caused by such compression is greater than that which follows the application of an ice-bag.

During the month of January, 1901, the State Board of Health of Massachusetts found in its examination of food and drugs over twenty-nine per cent. of adulteration. Of course, only adulterated articles were examined, so this does not signify that twenty-nine per cent. of drugs and food are adulterated. Thirty-four per cent. of samples of milk, however, examined were found below the standard. Four milkmen were prosecuted.

Australian Bitter Bark in Influenza.—One of the drugs of the Addendum of the Brit. Pharmacopœia is *alstonia constricta*, known as bitter bark, fever bark, or Australian bitter bark. It belongs to the same order as strophanthus, and is a native of Queensland and New South Wales. It contains four alkaloids, one which alone possesses advantages from the therapist's standpoint, namely, alstonine. Alstonine is at present not sufficiently elaborated to make its use common, as it is very expensive. Both bark and alkaloids are very bitter, and the former has been employed by brewers to add bitterness to their ales. In Australia a decoction is said to be employed, and it is commonly known as "bitters." Preparations of the bark have been employed as a general tonic, and in certain stages of typhoid fever. The drug appears to act on the skin and kidneys as well as on the nervous system. The peculiar property of this bark is that it re-

sembles both quinine and strychnia. Physiologically, it does not act on frogs like strychnine, but, like quinine, the alkaloid alstonine paralyzes and finally kills amœbæ, paramœcia, but it is weaker than quinine. A general tincture of the bark has been employed as a tonic in influenza. Its employment is started as soon as the fever subsides, five to ten minims in chloroform being employed. It can also be administered before convalescence has set in because it acts as a good diuretic, eliminating the poison through the skin and kidneys.

Laryngeal Habit Spasm.—A report of a case of laryngeal habit spasm is made by Peter in the *Annals of Pediatrics and Gynecology* for March. The case was that of a boy who had chronic attacks, and would also have attacks of laryngeal spasm, taking the form of a clicking phonation during talking and when not talking. The normal vocal cords, with the history, gave the verity to the diagnosis. The main treatment consists in the regulation of the patient's life, with quietude. If any general treatment is necessary give tonics, or if the nervous system demands any special medication the bromides must be administered.

Organo-Therapeutics in Mental Disease.—Dr. C. C. Easterbrook, of the Royal Asylum, Morningside, Edinburgh, has contributed a very valuable addition to our knowledge of organo-therapeutics in mental disease. He points out that the immediate nutrition of any organ is of a twofold nature: hæmic and nervous, and depends upon a proper supply of blood pabulum and of trophic nerve impulses. The brain cortex directly dominates the nutrition of the efferent portion of the central nervous system. In the treatment of mental diseases with the thyroid extract, Dr. Easterbrook very justly contends that "many of the recoveries reported were not true tests, in that thyroid was employed when there was still a good chance of recovery by the ordinary methods of treatment." In Dr. Easterbrook's cases only cases were handled which were chronic or stationary. The results were, on the whole, unfavorable. Amongst the symptoms known to follow were loss of weight, increased bodily metabolism, quickening of the pulse, phosphaturia, and general cerebral stimulation. The thyroid treatment with women was more efficacious than that with men.—*The Lancet*, Feb. 9th.

Diphtheria Antitoxin by the Mouth.—McDonnell, in *The Lancet* for February 9th, narrates the treatment of a case of diphtheria by the administration of diphtheria antitoxin by the mouth, and he assumes that this is as good a way as by injection, inasmuch as success attended his efforts, amelioration taking place as rapidly as is the case with the hypodermatic method. It is a fact that the hypodermatic injection sometimes causes struggling on the part of the patient and thereby lessens chances for recovery, and we take it that McDonnell advocates the treatment of all such cases by administration of the antitoxin in that way. Otherwise we believe that the physician can best assure himself of success in the treat-

ment of this disease by putting it under the skin. The skin between the scapulæ or on the buttocks is about the best place, and here it can be accomplished by the skillfull practitioner in the majority of cases without the children making much trouble. A great deal depends upon the man "behind the syringe" in these cases.

Plague Cases in San Francisco.—Some weeks ago the government appointed as a special commission to investigate the plague in San Francisco the following gentlemen: Prof. Simon Flexner, of the University of Pennsylvania, chairman; Prof. F. G. Novy, of the University of Michigan, and Prof. L. S. Barker, of the University of Chicago. The appointment of this commission was made with the idea of having them co-operate with the medical officer of the U. S. Marine Hospital Service in the definite establishment of the existence of the plague in San Francisco. While there was no doubt in the minds of the officials of the Bureau, still it was deemed advisable to have outside expert consultation in this matter, in view of the fact that there has been considerable friction between the officers of the Service in the proper discharge of their duties and the local health and municipal officials of that city. It is well known that the efforts of the Service officers at hindering the spread of the plague were seriously hampered by the commercial-spirited officials of the city and state. Thanks to the above appointment, it was finally admitted by these self-same officials that plague did exist in 'Frisco. Acting upon information gained by these gentlemen, a conference was held at Washington between a committee representing the governor of California, the mayor of San Francisco, business men interested, and the secretary of the treasury and the surgeon-general of the U. S. Marine Hospital Service, in which conference all the facts were discussed and a written agreement made for harmonious action in suppressive measures under the advice of Surgeon J. H. White, who is on the ground. On the return of this committee to 'Frisco, Surgeon White wired that they had agreed to raise funds for immediate work as follows: Disinfect all infected houses, provide hospital for suspects, detention houses and morgue. Also, these funds were to be used for the general disinfection of Chinatown and betterment of air and light space.

It is quite encouraging to hear that at last the senseless people of 'Frisco have had it dawn upon them that their efforts at resisting the conscientious work of the Service officers were foolhardy, and really criminal. Their attitude from first to last was one that would have been sensible in the Middle Ages, in an epoch of ignorance and superstition, but which was strangely out of time in this enlightened period. We are glad to hear that light has dawned in the far West, and we feel assured now that the work of the Service officers, with the co-operation of the town people, will result in the elimination of the disease from the plague-stricken district.



A Treatise on Appendicitis. By GEORGE RYERSON FOWLER, M. D., Professor of Surgery in the New York Polyclinic, etc. Second Edition, Revised and Enlarged. Philadelphia and London: J. B. Lippincott Company. 1900.

Certainly the importance and frequency of the disease appendicitis justifies its consideration in a special book, and we are glad to make mention of the meritorious work of such a leader in surgery as Dr. Fowler. The subject is one which is under contention by many surgeons. With the aid of the book at hand the physician can quickly come to a just appreciation of the correct status of appendicitis. The volume first goes into a lucid explanation of the anatomy and pathology of the parts in the region of the "typhlon," and then the author gives a good account of the symptoms, diagnosis and treatment. The surgery of the disease is considered in great detail, embodying the different methods of operation. The author's own method of operation is fully explained, giving the sketches, etc. His ingenious method of retracting the abdominal walls in operating is well illustrated. The work is thorough, and, coming as it does from one of the masters in this disease, it deserves reading by every practitioner. It should be widely read. We have seen no better book on the subject than this one of Fowler's.

A System of Practical Therapeutics. By Eminent American and Foreign Authorities. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics, Jefferson Medical College; Physician to Jefferson College Hospital, etc., Philadelphia. New (second) edition, thoroughly revised. In three very handsome octavo volumes, containing 2593 pages, with 427 engravings, and 26 full-page colored plates. Per volume, cloth, \$5.00, net; leather, \$6.00, net; half morocco, \$7.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York. 1901.

Hare's "System of Therapeutics" is essentially a practical epitome of the subject, and can be vouched for to meet the demands of the practicing profession, as well as the needs of the beginner in medicine. The aim of the work is to dig into what is practical and present only that which bears the impress of fact. This aim has been well accomplished in every volume, and is impressed on the reader at first sight. There is much of recent investigation in the therapeutic field which the ordinary medical man cannot follow in chance journals which come to him. It can be as-

sured that the work at hand takes in all that is worth anything, and that it is thoroughly up-to-date. The book is not a mere collection of drugs and a recapitulation of their usages: it is an exhaustive treatise on therapeutics, with special attention to hygienic and dietary treatment of disease, as well as a rational discussion of the use of remedies in disease. We take pleasure in recommending it to the medical man.

Fischer—Infant-Feeding in Health and Disease. A Modern Book on all Methods of Feeding. For Students, Practitioners and Nurses. By LOUIS FISCHER, M. D., Attending Physician to the Children's Service of the New York German Poliklinik; Bacteriologist to St. Mark's Hospital; Professor of Diseases of Children in the New York School of Clinical Medicine; Attending Physician to the Children's Department of the West-side German Dispensary; Fellow of the New York Academy of Medicine, etc. Containing 52 illustrations, with 16 charts and tables, mostly original. 368 pages, 5 $\frac{1}{4}$ x 8 inches. Neatly bound in extra cloth. Price, \$1.50, net. Delivered. F. A. Davis Company, Publishers, 1914-16 Cherry street, Philadelphia, Pa.

This is a very able exposition of the principles of infant-feeding, and is a good working manual for those whose function it is to handle sucklings and infants. The first part is devoted to a theoretical consideration of the anatomy and physiology of digestion and the action of bacteria on food, etc., all very important points. The chapters on direct feeding are good. The book certainly has a place in literature, and reflects credit on its author. There is no more important subject than that of infant-feeding, and we warmly welcome a book which promises to lay down proper methods of feeding.

Burlington Route for American Medical Association Meeting.—The Burlington Route, famous for its excellent passenger service, has again manifested its courteous regard for the medical profession by making a particularly low rate for the several medical meetings convening in St. Paul early in June. The rates as scheduled are for May 27th, 28th, 31st, and June 2d and 3d, good returning until June 15th for one fare plus two dollars [making \$18 from St. Louis]. Leaving St. Louis the best train will be 2.05 p. m., arriving in St. Paul 8.40 a. m. next day. Further announcement next issue. Information furnished and reservations made by either INTERSTATE MEDICAL JOURNAL or J. G. Delaplaine, City Pass. Agent, Burlington Route, St. Louis.

SURGICAL SUGGESTIONS.

Fixation of Loose Kidneys.—Morris (in the *Medical Record* for February 23d) describes a method of fixating loose kidneys. In this operation a flap of capsule, including the larger part of the mesial surface of the kidney, is incised with a scalpel, and stripped up with the parenchyma attached to the convex border of the kidney. The flap of capsule is drawn through a slit in the psoas or quadratus muscle, and is then sutured in place.

In the past twenty years only 188 cases of gastric ulcers have been treated surgically, with a mortality of 16.4 per cent. This was up to six months ago. Since then many more cases have been operated, with better results. Gastro-enterostomy, above all others, is the one to be relied upon in the surgical treatment of gastric ulcer.

Excision of a gastric ulcer is unnecessary. Pyloroplasty is apt to be followed at a later period by recurring stenosis.

Pylorectomy is an unnecessarily severe operation for simple gastric ulcer, and presents no advantages over simple gastro-enterostomy.

Pylorodiosis, which consists in stretching the pyloric sphincter for the cure of gastric ulcer, is very dangerous and also apt to be followed by recurrence.

Perforation is one of the severe complications of gastric ulcer, and is apt to occur in fifteen per cent. of the cases. Hemorrhage occurs in eighty per cent. of all cases. Hour-glass contraction of the stomach occurs in some cases when the ulcer is situated in the middle of the organ.

Long states that drainage is employed in abdominal surgery to drain away septic material already existing; to afford an exit for the sepsis which the operator thinks he may have inflicted on his patient; to provoke adhesions, and thereby wall off processes from the general peritoneal cavity; to keep the peritoneal cavity free from blood and other fluids; to allow of a more certain knowledge of the conditions present in the abdominal cavity; gauze drains are sometimes employed as tampons to control hemorrhage.

Frankel demonstrated, in a series of twenty-one cases, that carboligni constitutes a splendid substitute for the poisonous iodoform, to which it proved inferior only as a deodorant.

NEW REMEDIES

The Successful Treatment of Tetanus with Chloretone—Report of a Case.—(By C. F. Baumeister, M. D., Panama, Iowa.)—On the 12th of July, 1900, I was called in consultation to see a man, twenty-eight years of age, and a farmer by occupation, who had been suffering for two days from trismus. Evidently, the bacillus tetani had been introduced through an injury of the foot caused by the patient stepping upon a nail two weeks before.

Although the wound had completely healed at the time of my visit, it was still very tender on pressure. The teeth were so tightly closed that the inferior maxilla was virtually immobile, and on account of orthotonos dyspnœa was very pronounced. The patient's temperature registered 102.2°, and the pulse rate was 125 a minute.

Under the anesthetic influence of chloroform the wound was treated *secundum artem*, and a hypodermic injection of one-fourth grain morphine sulphate and one-hundredth grain atropine sulphate was given every two or three hours.

Upon the following day, July 13th, I was somewhat surprised to find that the convulsive seizures were more severe than before, with occasional complete opisthotonos. I thereupon prescribed the following mixture:

R	Chloretoni.....	3 iss
	Spiritus vini rectificati.....	3 ss
	Misce: sol. fiat et adde extracti nucis vomicæ fluidi,	
	Extracti digitalis fluidi.....	aa ʒ j
	Syrupi amantii.....	q. s. ad. 3 ij

M.

Of this solution, one teaspoonful was given every three hours by pouring the fluid between the cheek and the teeth, and the nurse was instructed to give the patient some morphine, if necessary. While it was possible, by the exercise of considerable patience, to administer the medicines by the mouth, we were compelled to give all nutriment by enema, since, on account of the great rigidity of the cervical muscles, there was extreme dysphagia. The obstinate constipation and the flatulence were relieved with clysters of soap and water.

Upon the 15th of July I found the patient in fair condition. He had not required any morphine since the chloretone mixture had been prescribed, two days before. The pulse rate was now about 80, and the temperature normal. The teeth could be separated one-fourth of an inch. As deglutition was performed with less difficulty, rectal alimentation was discontinued, and broths and milk were given through a tube. The orthotonos was not so severe, and the dyspnœa was markedly relieved. The chloretone mixture was continued, with an occasional hypodermatic injection of atropine sulphate. On the 18th of July the man was notably improving, and could separate the teeth half an inch. On the 22d of July he sat up in bed and could freely move the lower jaw, the muscular rigidity having almost entirely disappeared. The daily dose of chloretone was reduced to ten grains at night, and tonics were prescribed.

I did not see the patient again until July 29th, when he was perfectly well, had an excellent appetite, was free from nervous symptoms, and reported that he was sleeping well; in fact, he was in good health.

I wish to direct attention particularly to the fact that the heart was not in the least depressed by the chloretone, nor was the stomach disturbed. Furthermore, when morphine failed, chloretone controlled the spasms. I report this case with considerable satisfaction, as I am positive that chloretone saved this man's life. I might add, that when I was first called to this case I was unable to procure anti-tetanic serum without delay. Afterward, we had such good results from chloretone that we did not resort to the serum at all.

Labordine.—The attention of our readers was directed to the formula and therapeutics of this product in the February issue. It is a valuable antipyretic and analgesic, and is to be commended, particularly as it exercises a stimulating effect on the heart in addition to the aforementioned action. The writer has used labordine, both singly and in combination, in several cases with satisfactory results. One case, a patient suffering from a pronounced type of malarial fever, was but slightly influenced under ordinary quinine treatment, but responded well to laborine and quinine (*aa.* gr. v., t. i. d.), with double dosage two hours before expected paroxysm. Labordine, salol and quinine (*aa.* gr. iii.), four times daily, was used with good satisfaction in several cases of la grippe.

Saccharomyces Cerevisiæ in Furunculosis.—(By Ph. Chapelle, M. D., Ancien Interne des Hopitaux de Paris.)—Yeast (*saccharomyces cerevisiæ*) has long been recognized of therapeutical value in the treatment of furunculosis and certain skin diseases. The principal obstacle in the way of this treatment becoming universal has been the difficulty experienced in obtaining the yeast fresh and in preserving it free from secondary changes, which take place with great rapidity and render its distribution almost impossible; indeed, in hot weather these changes take place from one day to the other.

In order to place at the disposal of patients an accurately dosed medicament, not liable to undergo change, a pure desiccated yeast, which occupies but a small volume, and is possessed of the same therapeutical activity as the best fresh yeast, is the best form of administering it.

This is obtainable as cerevisine in the granulated form, which facilitates its administration and is more reliable than fresh yeast in its effect.

The activity of cerevisine has been established by numerous clinical observations, and, from a chemical point of view, it has been ascertained that in presence of sugary liquids it gives rise to alcoholic fermentation, with the gradual production of carbonic acid gas. These observations show clearly that the desiccation of yeast in nowise impairs its properties. Moreover, it never gives rise, like fresh yeast, to a sensation of heaviness on the stomach or acid regurgitations, so that it may safely be given to dyspeptics.

Cerevisine disintegrates rapidly in water, and succeeds admirably in the treatment of furuncles and boils, which promptly subside and disappear under its influence. In cases of acne, urticaria, psoriasis, herpes and eczema, its exhibition has also been followed by excellent results, this

effect being associated with a corresponding improvement in the general health.

The dose of cerevisine is from two to three teaspoonfuls daily before meals. This should be rubbed down with a little water or beer sweetened with sugar.

Dermapurine for Acne.—First, all irritating causes must be removed. Prescribe but very little soap of any kind, and when soap must be used, employ only dermapurine soap. Be careful about the use of face powder, best to advise against the use of it. If bromides are the cause, they must be discontinued, or the cure will not be permanent. If black-heads are the cause, they must be treated as directed under "black-heads." In any case, prescribe hot applications by means of a soft cloth, folded to several thicknesses and soaked in hot water, and to be applied as hot as it can be borne. A second cloth should be soaking and ready to be applied immediately after the first is cooled.

These applications are to be kept up for about an hour, and several times a day, if possible. After these applications, the skin is to be dried without rubbing. Then apply dermapurine. At bedtime apply a soft cloth that has been saturated with dermapurine.

The first effect of this treatment will be the reddening of the skin for a short time only, but the final result will be the cure of the very unsightly and often loathsome trouble.

The foregoing treatment is intended for chronic cases of acne; but in a mild case, as in the appearance of a few pin-head pimples, it will not be necessary to use the compress. Of course, the appropriate internal treatment should be followed at the same time, such as the interdiction of certain class of foods, the regulation of the bowels (by means of magnesia sulphas in carbonated water, say a teaspoonful every night), and sulphide of arsenic grain 1-60 three times a day, or any other preparation the physician may see indicated.

Eskay's Food.—This albuminized food has a place in the progressive physician's list of remedies, not alone for infants but equally for adults. It is easily retained on the stomach of convalescents from fever and other conditions calculated to interfere with the alimentary tract. Given just preceding and following surgical operations it will sometimes prevent and always lessen the nausea of anæsthesia.

Acneine.—This product represents a prescription containing zinc oxide, lanolin, oleum olivæ, sambucus, with the proper excipient. Many reports have been made as to its value in acne, eczema, pruritus, and other affections of the skin. It is also regarded as a valuable healing agent in ulcers, burns, etc. Samples and literature will be furnished by the Acneine Pharmacal Co., Omaha, Nebraska.

A prominent New York physician wrote to the Maltine Company: "If we are to have 'grip' all winter I am afraid that you will not be able to supply the demand for 'malto-yerbine.' I find it invaluable." Many others express the same opinion of malto-yerbine. Dr. Andrew H. Smith, before the New York Academy of Medicine, stated that his chief reliance to control the cough of la grippe was the internal administration of malto-yerbine.

Interstate Medical Journal.

VOL. VIII., NO. 5. MAY, 1901.

Issued Monthly for One Dollar a Year.

EDITORIAL DEPARTMENT.

WARREN B. OUTTEN, M. D.,	-	-	-	-	} EDITORS.
WILLIAM PORTER, M. D.,	-	-	-	-	
R. B. H. GRADWOHL, M. D.,	-	-	-	-	
OTHO F. BALL, M. D.,	-	-	-	-	
					MANAGING EDITOR.

Address all communications, news of medical interest, subscriptions, etc., to the INTERSTATE MEDICAL JOURNAL, CENTURY BUILDING, ST. LOUIS, MO.

THE MEDICAL DIRECTOR OF THE WORLD'S FAIR.

The office of Medical Director of the World's Fair will be an important one. Not only will the best plans for prompt medical and surgical relief be required, but there should be the greatest care for the best sanitation during the building, grading of the grounds, and the perfection of the general arrangements.

We suggest, first, that the office be created with a full sense of the responsibility attached. There will probably be more people here during the hot season than have ever been assembled in mid-summer in this latitude. An epidemic of a large number of fatal sun-strokes or a great accident, would be disastrous beyond compute.

To avert such a possibility there should be the best methods for securing plenty of pure water, good drainage, cool rest-places, and stations for medical and surgical emergency cases. Not only should there be a director, but he should be provided with a large corps of competent assistants. For climatic reasons, as well as for many others, the medical staff cannot be organized too carefully.

The medical director should be the most available and the most efficient man that it is possible to secure. He should have had experience in this work. He should be one who is willing to sacrifice something, if need be, for there will be a vast amount of work, and the office will be no *sinecure*. He cannot be entirely guided by the experience of the directors of other expositions, for the conditions here will be unusual.

Such an office should command a good salary. The service that is demanded cannot be given by a mediocre. It should be of the most intelligent, practical and scientific order. Most of all, the office should not be filled as the result of petitions, personal influence or political favoritism. We want the best man for the place, and the profession of the city will do well to see that only the best man gets it.

Some correspondence following the above editorial in our last issue furnishes food for further comment. We were not aware that we were trespassing on the confines of "a still hunt," or jeopardizing any individual expectations. This is an appointment that should be fully discussed

and carefully made. Favoritism should have no place, and "wire-pulling" no value. The physician who is appointed will have to sacrifice his time, money and effort. He may have some return in the prominence given to the office, but it is not likely to be a full return. The salary attached, ample as it should be, will not equal the expenditure. The man who seeks the place for selfish purposes, should he get it, will be disappointed.

We repeat that the office of Medical Director of the World's Fair is a most responsible one. The physician who is chosen for it should be a man of executive ability, energy and experience. It is not so necessary that he should be an accomplished surgeon, physician, or even sanitarian. It would be well if he could be all of these; but he will be able to secure the services of experts in these departments. He himself must be, first of all, a director, *a man of proven executive ability*, one who can select and utilize others, who can recognize important indications and find men to meet them.

We have been asked: "Have we a candidate?" Yes, we certainly have. He is the man whom the directors will choose after a careful investigation of his fitness, regardless of his influence, social position or ability as a "rustler." He is the man who will be deemed most competent to conduct and direct the affairs of this important position without reference to his personality or association.

A correspondent asked us: "Can you name such a man?" No; but he will be found. *Let the place seek the man, and the right man will get the place.*

W. P.

THE STUDY OF PSYCHO-PHYSICS.

One of the signs of the times is the movement now on foot to establish a laboratory for the study of psycho-physics as a subdepartment of the Department of the Interior at Washington, D. C. Thanks to the foresight of men who see the importance of this study, the project has been favorably considered and only needs favorable endorsements to further its accomplishment when it will be presented to Congress for action. The purpose of this laboratory will be the extensive study of criminology in all its phases, the compiling of statistics on the subject, and the publication of dissertations along the same lines. Such experimental work as comes within the sphere of the subject will also be done.

It cannot be too strongly recommended. We are in need of all the knowledge that can possibly be massed together on this subject. This knowledge can be massed in no other way than by such a laboratory, operated by the government, under the executive management of experts in psycho-physical study, with sufficient lay help to accomplish results in fairly good time. Every day sees some new advance in the sociological aspect of this department of science. Since the first writings of Lombroso, decided progress has been made along these lines.

Not only will criminology in its relationship to psycho-physics be studied, but also the subjects of the pauper and defective classes of society.

It is becoming a serious problem of the day for us, and the growing evil must be handled. In no better way can it be handled than by a careful consideration of the present status of these classes, consisting of statistical tables showing percentage and etiological factors, where it is possible to find them. Once this is carefully done, then will measures looking towards the relief of these conditions be in order, just as other scientific problems have been successfully treated in the past. First of all, however, we must have information and cogitation. Then can measures looking towards their relief be enacted, and some sort of an Utopian improvement hoped for and accomplished.

TETANUS TOXIN.

In these days of toxins and anti-toxins, constant work is being done in efforts to promote the cause of humanity by finding biologic cures of deadly diseases. The disease tetanus is one with which the bacteriologic world has been wrestling for some time, in an endeavor to cure it by serum therapy. Some good results, it is claimed, have been obtained in the treatment of this disease by the anti-tetanic serum. In severe cases, however, but little good has been accomplished, owing to the severity and rapidity of the effect of tetanus toxin on the central nervous system.

Anything that relates to the serum therapy of this disease is interesting, and we note in this connection some excellent work which has been done by Ransom, of Marburg, in Behring's Institute of Hygiene and Experimental Therapy (*Berliner klinische Wochenschrift*, No. 13). The experiments performed by Ransom were on the subject of the manner of absorption of the tetanus toxin: whether through the blood stream or through the lymphatic system. The experiments were conducted on dogs, and in this way: The thoracic duct and an artery were laid bare and connected with canulæ; tetanus toxin in definite quantities was injected into the skin in the left inguinal region. At stated times, varying from fifteen minutes to five hours, the lymph from the thoracic duct and the blood from the artery was tested for the presence and quantity of toxin. It was found that the toxin invariably appeared first in the thoracic duct fluid, usually in fifteen minutes from the time of injection, whereas it was much slower in appearing in the arterial blood. From this experiment it is evident that the tetanus toxin goes first into the lymph vessels and thence into the blood stream, not direct into the blood circulation. Subcutaneous injection of the toxin showed that it appeared very slowly in the lymph and blood streams, probably due to the resistance encountered in the lymph glands, which act as a barrier against its resorption. Another experiment made was the subcutaneous injection of the tetanus toxin into the left breast muscle of a pigeon. Five days later the pigeon died and its muscle was subjected to analysis. It was found that the major proportion of the toxin remained in the muscle at the site of injection, a small part was found in the rest of the muscle tissue, and only a very small quantity was

found in the blood serum of the muscle. It was also found that the spinal cord substance was particularly receptive to the tetanus toxin when injected into the cord, much more so than the brain substance.

These researches are highly interesting, and are very much in order in our work on searching for the cure of this deadly disease. There is much room for work along the line of improvement in the administration of what we now call the anti-tetanic serum, and there is much more room for work along the line of increasing the potency of the serum which is to ultimately prove the "cure-all" for tetanus, if that idea will ever be reached.

THE HEATED TERM.

The all-absorbing question with many who live in the larger cities and towns is: "Where shall we go for the summer?" Did it ever occur to our readers that home is a pretty good place? Let us take the case of the average summer "resorter." He must go somewhere during the heated term. He always has gone, and it is only a question of where to go.

If it is a matter of pleasure or needed rest, go; but from the standpoint of health, consider it before deciding. With proper care as to food and clothing, the frequent use of the bath, the avoidance of ice water in quantity, long rides in the evening on the street-car (which is the best, cheapest and most independent vehicle when it is not too crowded), and a letting up a bit on business worry, even the hottest summer can be endured with comfort.

Contrast this with the burden of travel, the possibly indifferent form, the inconvenience of the usual summer hotel, the high nerve-tension of the overcrowded resort. Then there is always the "hot spell" to be endured in September or October, after the return, and which is all the more oppressive to those who have been summering in cooler regions.

It may be well for those who have the time and money, who have the responsibility of little children, or the handicap of poor health, to go away; but even they should not sacrifice too much of home comfort for the uncertainty of summer travel. If it is a necessity to go away, then prolong the vacation till the temperature is lowered at home before returning.

From personal observation we are inclined to believe that those that stay at home may have as good a time, be at least as comfortable and as fit for the work of the rest of the year, as those who go away. We speak also from personal experience, having tried both thoroughly and under the most favorable conditions. Hereafter it is possible our summer vacation will be at home. (Unless it gets too hot!!)

THE AMERICAN MEDICAL ASSOCIATION MEETING.

The annual meeting of the American Medical Association will take place at St. Paul, Minnesota, June 4th to 7th. The selection of this city a second time as a place of meeting for the association is perfectly proper, inasmuch as it is an ideal spot for the holding of conventions; and, besides,

is a central point from which excursions to interesting points can be carried out after the day of adjournment of the convention. Arrangements of the executive committee and the program committee of the association demonstrate that this meeting will be well worth the attendance of every practitioner who can possibly get away for it. Railroad rates will be reduced, and thereby one considerable item of expense lowered for those who live long distances from St. Paul. It cannot be too urgently recommended to the physicians of this country that they should lend their support to this association above all others, and that support can be shown in no better way than by attendance on and discussion of the valuable papers always presented at their sessions. Every one can find something in one of the numerous sections which will interest him, and often afford him information well worth the trip to acquire. At these meetings the specialist from the city joins arms with his colleague from the country; each can lend the other assistance, and each can leave the meeting mutually benefited by the contact. The differences between country and city practice are admittedly great, but interests are the same, and both the city and country practitioner are working for the same end—the cure of disease. Another point that will interest and benefit all is the pathologic exhibit, which is year by year becoming known as one of the leading features of the convention.

STRIKES AMONG MEDICAL MEN.

The physicians of Leipzig have “gone on a strike” for higher wages. This announcement reached us through the daily press some time ago, and later advices confirm it in every particular. It seems that the medical rates in Leipzig, as they are in nearly all the German cities, are ridiculously low; so low, in fact, that it hardly seems possible that even a small proportion of the practicing profession there make a living from their daily toil. It struck the writer as a peculiar fact that in Germany the physicians are very poorly paid. The explanation for this can be found, first, in the existence of so many free polyclinics, and, secondly, because there are so many doctors practicing in that country. While it is understood in the German cities that only the poor and indigent are to expect free treatment at the polyclinic, still we have often seen cases of supposed poverty treated in these places where it was clear that the applicant could well afford to pay a physician.

It is not at all strange, then, to see why the physicians of Leipzig have at last declared themselves. There is no reason to doubt that they will carry their point if they stick together. It is within their power to eliminate one factor in their lower pay—*i. e.*, the free clinics. When we come to a discussion of the rights of physicians, in so far as whether or not they should refuse sick people treatment when the fee was not forthcoming, then truly are we in a quandary as to what we should say. It seems hard, indeed, to think that a person seriously ill should be refused attention by a medical man because his “union” declares that no one should

be treated until higher pay was received. And yet this is exactly what a strike means; and it is this fact to which labor leaders ascribe the success of their "hold-outs." Ergo, we must confess that from the standpoint of humanity, the right is not with the might of the physicians of Leipzig in this instance, much as we wish them well in their efforts for higher pay. Their policy, strictly adhered to, would mean a descent of the profession of medicine to the level of the trades, which should not be. We would recommend that the physicians of Leipzig would organize to combat the cause of their downfall, and should seek to remedy the fault in another way than by "striking," so that suffering humanity, miserly and ungrateful though it sometimes be, may still receive that attention which it is their right to demand and receive from our hands.

CONGRESS OF TUBERCULOSIS.

The Second Annual Congress of Tuberculosis will convene in New York, May 15th, coincident with the meeting of the Medico-Legal Society. All the classes interested in the enactment of laws looking toward a suppression of the dread disease have been invited to attend and co-operate with the members. Sanitarians, lawyers, physicians, governors of the several States of the United States, Canada and Mexico, have been invited. The movement is certainly in the right direction and should certainly culminate in decided results. That tuberculosis is a communicable disease, and that through its communicability it is increasing rapidly in all quarters of the globe, goes without saying. It is also true that, looking at the matter from the standpoint of public health, rigid measures of control can cut it down and eventually exterminate it. Why not, then, should this be done, and that, too, immediately? The dread scourge is upon us, and unless we rise up and crush it, it will crush us. By means of preventive legislation much good can be accomplished. First of all, the indiscriminate spitting of tuberculous people can be stopped and thereby one of the principal means of communication of the disease shut out. Then, again, by proper laws tuberculous patients can be housed in suitable climates, where their own best interests and that of the community can best be subserved. Again, by legislation, we can prevent the marriage of tuberculous people and the element of heredity stamped out forever. The question resolves itself into an enlistment of the attention of the laity in the importance of the question and their hearty co-operation in enacting laws relating thereto. To this end it should behoove the profession of medicine to lay the matter before their patients and friends in a clear light, so that all may realize what the disease really means and what urgent necessity there is for immediate action. A broad policy of education of the masses in these facts as to the cause, the danger, and the remedy for a factor in diminishing the spread of tuberculosis, it seems to us, should take precedence over the enactment of laws for drastic measures. Let these two plans stand in this way: First, let us educate the masses,

and then let us act drastically. If we proceed to act with drastic measures before their minds are ripe to the exigencies of the occasion, then will we be met with that blind prejudice founded on ignorance and rank sentiment that has ever opposed measures of public health. Ignorance, superstition and bigotry have ever been the foes of humanitarians. Let us first conquer these foes, and then we can proceed with ease to conquer the dread scourge itself.

TYPHOID BACILLUS IN WATER.

It is a matter of common knowledge that the typhoid bacillus in drinking water is the favorite method of the production of epidemics of the disease of typhoid fever. The instances of typhoidal pollution of drinking water are numerous in medical history, beginning with the memorable epidemic at Plymouth, Pennsylvania. Strange as it may seem to the medical man who has done but little work in the identification of bacterial species, the fact must be stated that it is one of the most difficult problems in laboratory work to positively identify the bacillus typhosus in drinking water supposed to be polluted by it. In fact, so difficult is it, that when a water worker is confronted with the task of analyzing by bacteriologic methods a sample of polluted water, he aims more to find that index of water pollution by human feces, the colon bacillus, than to waste time and efforts in looking for the typhoid bacterium. There are few instances on record where reputable workers have actually found the typhoid bacillus, even though they were almost positively known to be present.

It is with considerable interest, therefore, that we read an account of the finding of the typhoid bacillus by Fischer and Flatau (*Centralblatt fuer Bakteriologie*, etc., Bd. xxix., No. 8). These investigators examined water of a well whence water had been used among families in which typhoid fever broke out. The bacillus which they found in this water corresponded, from a cultural and morphologic standpoint, to the bacillus typhosus. It also clumped in the presence of typhoid fever blood. Isolation took place on a five per cent. carbolic acid gelatin medium. The method of Levy and Bruns for isolating this species was negative. These men are really to be congratulated if they have really found the bacillus typhosus in this instance. It is a source of joy to the hearts of those who have struggled with this problem to find that occasionally—rarely, we might say—this discovery is made.

A NEW METHOD OF BLOOD STAINING.

Willbrand recommends a slight departure from the usual eosin-methylene blue method of staining blood specimens (*Deutsche med. Wochs.*, No. 4). To the following solution, 50 per cent. solution of eosin in 70 per cent. alcohol, equal quantity of concentrated watery solution of methylene blue, for each 50 ccm. add 10 to 15 drops of a 1 per cent. acetic acid solution. The preparations are placed in this solution and warmed until

gas bubbles come off. The erythrocytes are stained red, the nuclei dark blue, the neutrophile granules violet, the acidophiles red (eosinophiles), and the Mast cell granules intense blue. The *technique* is simple and results are good.

This is a very good change for the better in the ordinary eosin-methylene blue preparation of the blood, and shows quite a good picture for the hemotologist. By the addition of the acetic acid to the stain as ordinarily used, the several pictures detailed are presented, and that, too, in an easy manner. Care should be exercised in the heating of the specimens, however, as artifacts are liable to be formed and may prove misleading.

MISSOURI STATE MEDICAL ASSOCIATION MEETING.

The next annual meeting of the Missouri State Medical Association will be held at Jefferson City, Mo., May 21, 22 and 23, 1901. The program of the meeting promises that the affair will be a banner one in the history of the Association, and will even eclipse the meeting which was so successfully conducted at Mexico last spring. Every member of the profession in the State who is eligible, should see to it that he attends this meeting. Aside from the excellent papers and discussions which will be heard, the timely questions of the day which are of much importance to the practicing profession of the State will come up; legislative problems looking towards the betterment of the status of the profession are in order, and there should be a concerted movement on the part of all to lend their support to all such questions. It is but once a year that the medical men of this State have an opportunity to convene, and certainly the few days of the meeting will not take any man from his practice too long to render attendance impossible. It is simply a question of taking the initiative on the part of the individual members of the profession. It is "up to them" to do so.

CLINICAL LECTURE.

CLINICAL LECTURE ON SURGERY.¹

BY WILLIAM L. RODMAN, A. M., M. D.,

Professor of the Principles of Surgery and Clinical Surgery at the Medico-Chirurgical College, Philadelphia.

THE first patient we will bring before you to-day is a case for the radical cure of hernia. In the first place, you see a great many operations performed for the relief of hernia at this and other clinics, but you are not to infer on that account that an operation is the only cure for hernia. As a matter of fact, the majority of cases of hernia are not operated upon. There are many cases where the application of a properly fitting truss will effect a cure. A majority of children under ten years are cured by wearing a suitable truss. The application of a truss to an adult may afford relief, but I do not think a cure is ever effected in this way in patients over thirty years of age.

The patient who is about to come before you is a barber by trade, is necessarily on his feet a great part of the time, and his hernia is getting to be a source of great inconvenience to him. Again, he finds the wearing of a truss is a constant hindrance to him in his business. There are better reasons for a radical operation than the mere inconvenience caused by wearing a truss; one important one being that men cannot enter a public service, such as the army, navy, or marine corps, if they have a hernia. But the government no longer debar a man who has been successfully operated upon for hernia. Again, a man's business may necessitate his traveling long distances on the train, away from relief, and there is constant danger of strangulation; such a man should be advised to have a radical cure performed. So much for reducible hernia.

In *all* cases of irreducible hernia, a radical operation should be advised, unless there is some positive contra-indication. The contra-indications for an operation are as follows: *First*, if the patient is very old and the hernia large; and, *secondly*, if there be any accompanying visceral disease, as of the liver or kidney. Barring such conditions as these, all cases of irreducible hernia should be submitted to a radical cure. Now, what is the difference between reducible and irreducible hernia? In the first place, the reducible returns into the abdomen when the patient lies down, and can be retained to a degree, if not entirely, by a truss. An irreducible hernia, on the other hand, never leaves the scrotum, and a truss would be out of the question. Now, if the hernia remains outside, adhesions take place and the gut remaining there in an exposed condition, there is danger of in-

¹ Delivered by Professor Wm. L. Rodman at the Medico-Chirurgical College, and reported expressly for INTERSTATE MEDICAL JOURNAL.

flammation, incarceration, and rupture. Therefore, it is quite a different proposition for a man to go about with a large irreducible hernia than with a reducible hernia that can be kept in place by a suitable truss. The dangers are so great in irreducible hernia that all authorities agree that an operation should always be done unless there is an important contraindication.

Now as to the methods for radical cure of hernia. It would be impossible for me to describe all the operations. I will simply describe Bassini's method, which I consider the best. In Bassini's operation you practically construct a new canal, and change the existing order of things entirely, and a recurrence of the hernia is unlikely. In fact, Bassini's operation imitates nature by making a new oblique canal for the cord. An objection to Halstead's operation is that the cord is placed immediately beneath the skin, where in Bassini's the aponeurosis of the external oblique muscle covers the cord.

The steps of the operation are as follows:

Make an incision four or five inches long parallel with Poupart's ligament. This will practically extend from the external abdominal ring to the anterior superior spinous process of the ilium. This cut exposes the aponeurosis of the external oblique muscle. You then slit up this aponeurosis on a grooved director. The upper part or flap of the aponeurosis is then dissected upward and the lower flap downward. The cord is now drawn out and separated, with the sac, from the surrounding tissue, and, later, separated from the sac. In oblique hernia the cord is behind the sac. The sac having been dissected out and isolated is now opened. Never neglect the precaution of opening the sac, as it is possible that the bowel or vermiform appendix may be lying within, in which case it would be cut in the following step. The neck of the sac is now twisted and ligated and then cut off below the ligature. The cord is held up and kept in the upper angle of the wound, whilst the principal step of the operation, the formation of a new floor for the cord, is proceeded with. This new floor is made by suturing the conjoined tendon to the deep shelving of Poupart's ligament, beneath the cord. You must look out for the deep epigastric artery when passing your suture. You might also very easily injure the femoral vein. I usually place five, sometimes six, sutures in constructing a floor for the cord. The divided aponeurosis of the external oblique is now sutured over the cord, thus forming the anterior wall of the new canal. The wound in the skin is closed in the usual way.

In performing this operation use the fingers as little as practicable, as it is never possible to sterilize the hands as thoroughly as instruments.

You have possibly heard it said that the term "radical cure" is a misnomer, inasmuch as returns are frequent. Such could truly be said ten years ago, and I, myself, had little faith in the operation at that time. Improved methods, with perfect asepsis, have altogether changed the situation. Primary union I will not say is a *conditio sine qua non*, but I will

say that it is most important. In my own series of about one hundred Bassini operations, all have recovered, and so far as I know (and my cases have been followed with care) there has not been a single recurrence. Bull and Coley, of the Hospital for the Ruptured and Crippled, New York City, have had the largest experience of any other two surgeons in this country, doing, between them, considerably more than one thousand Bassini operations. Recurrences having been very infrequent, you are therefore justified in advising the operation, because, in the first place, it is comparatively safe, and, in the second place, a permanent cure is almost certain.

Bassini, in all of his cases, uses silk as a suturing material; and I must say that I, myself, have used it with satisfaction in very many cases. I am not one of those who believe that it cannot be buried successfully. I have repeatedly buried it in this hospital at this clinic, and have had no trouble whatsoever, save in one case, where there was a sinus for several weeks, until one of the sutures was discharged. Kangaroo tendon I have used a great deal as a suturing material. I like it. It buries well, and is sufficiently abiding to insure firm union between the musculo-tendinous structures brought together. Latterly I have been using silver wire. I believe that, all things considered, it buries better than other substances; and as my cases have thus far been most satisfactory, no pain, no sinus or other disagreeable incident following its use, I shall continue to give it the preference. You know, gentlemen, that many years ago, before asepsis was dreamed of, Marion Sims and others were advocating the use of silver wire in gynecological practice particularly. There must be, in the substance itself, that which has caused it to be preferred by so many surgeons. At Johns Hopkins Hospital, Baltimore, its use has been very general for some years, and the surgeons not only think it superior to other substances, but in talking with my friend, Professor Welch, than whom there is no greater pathologist, I was told that investigation had there been made which assured him and others that there was something in the silver wire antagonistic to suppuration. This cannot be explained; but I was certainly impressed with the statement, as I would by any, coming from such a distinguished source.

I close the aponeurosis of the external oblique muscle by interrupted sutures of chromicized catgut. The continued suture I sometimes use, but really think the interrupted better, allowing, as they do, for drainage; and that, in some cases where much traumatism has been practiced, is advisable. The skin is brought together with catgut. The dressings are not changed for a fortnight, unless they should be soiled, or the temperature should rise, or other symptoms which indicate an untoward course in the wound. It is always best, in my judgment, to keep a hernia case in bed at least three weeks—better four, especially in those who are relaxed or from any condition are a little below par. I attribute much of my limited success in this operation to the fact that I never allow patients to get up sooner than three weeks, and only of late have I permitted them to get

up so early. An increasing confidence in the operation has led me to shorten my time from four to four and one-half weeks in bed to three or three and one-half, owing to the age and general condition of the patient. Formerly I continued a compress after the patient left my hands. This same increasing confidence which I feel in the operation has caused me to discard compresses, bandages, or trusses of any kind, in all cases operated upon during the past five years.

At some future time, when occasion offers, I shall take pleasure in pointing out more fully the indications and contra-indications to a radical cure operation; but, in general, remember that the more active the life of a patient with hernia, the more prompt should he be to seek surgical aid. Particularly is it best that to laboring men, who partly from indifference, more from an inability to provide themselves with suitable trusses, should this advice be given. If you have a patient who is a banker or professional man, leading a sedentary life, with intelligence and the ability to wear suitable trusses as you will direct, there is not the same imperative need for an operation as in the first case cited. But, as optimistic as I am in certain cases, I have very positive convictions that radical cure operations should not be done many times where they are.

CASE 2.—The next case is an unusual one, and I therefore bring it before you. Three weeks ago to-day this old lady, who is seventy-six years of age and weighs more than two hundred and twenty-five pounds, was brought to the hospital suffering from a strangulated umbilical hernia. The hernia was very large—in fact, enormous—and had long been irreducible. She was previously operated upon, some four or five years ago, by a prominent surgeon of this city. The symptoms of strangulation were most marked. She was vomiting copiously, and shock was as pronounced as I have ever seen it. She was at once prepared for operation. On account of her age, the long-standing irreducibility and the large size of the hernia, I was perfectly content to complete the operation with a herniotomy, or, in other words, relieving the strangulation. In fact, I had said to my assistants that I would make no attempt at a radical cure, as her condition, all things considered, made me think it inadvisable. After cutting into the hernia, however, and relieving the strangulation, which was complete, three feet of intestines being in the tumor, I found that the adhesions were more easily broken up than I had anticipated, and I also found a large mass of omentum in the sac; so I changed my plan and supplemented herniotomy by a radical cure. A very large piece of omentum was resected, and the adhesions broken up and returned to the abdominal cavity; then I resected quite a large piece of the abdominal wall upon either side. She has not had a single unpleasant symptom since the operation. Her temperature, as you see from the chart, has never been above 99°. Her pulse has always been below 80, and the wound united *per primam*, or by first intention. I have never had or seen a more gratifying case, as she is a most intelligent, respectable and appreciative patient. It

is my very great regret that I did not think of having the photographer get a good picture of this very large hernia before operating. Time was important, however, as it always is in hernia, especially umbilical hernia, on account of the tense, unyielding nature of the umbilicus; therefore, the thought of a photograph escaped me until I was ready to begin operating, and I did not then feel justified in waiting.

It will be my pleasure, from time to time during the year, to bring before you cases after they have been operated upon, so that you may follow them up and know how they are one week, two weeks after the operation. Few stay with us longer than the latter term.

Erysipelas is treated with almost uniform success in the City Hospital by the local application of equal parts ichthyol and collodion. The inflamed surface is painted liberally, and the application extended an inch beyond the spreading margin. The patient, of course, presents an unsightly appearance while he is under treatment, but no other method has been found so satisfactory, and it seldom fails to control the disease at once.

Severe neuralgias may frequently be relieved by simple acupuncture. The skin overlying the seat of pain is pierced through and through by a needle, which is allowed to remain in place three to twenty minutes. The relief experienced (due, no doubt, to an irritation of the nervous terminals and a modification of the circulation) lasts for about ten hours. Persistent migraine has been successfully treated on the same principle, by the introduction of a tape seton through the skin at the back of the neck. These surgical methods are worthy of a trial when other means have failed.

Hydrotherapy is constantly gaining ground in the estimation of therapists. The *Medical Standard* makes the sweeping assertion that water is a better antipyretic than aconite or phenacetin, a better analgesic than opium, a better sedative than the bromids, a better cathartic than calomel, a better heart tonic than digitalis, a better diuretic than buchu or potassium citrate. This universal and sovereign remedy is certainly coming into more general use. The laity are not quite prepared to submit to treatment by pure hydrotherapy. They must have medicine; but the intelligent practitioner, who knows the value of water, can easily "medicate" it sufficiently to satisfy his patient and insure its free use.

ORIGINAL ARTICLES.

NEPHRECTOMY.

By C. E. RUTH, M. D., of Keokuk, Iowa,

Professor of Descriptive and Surgical Anatomy, Keokuk Medical College; College of Physicians and Surgeons, Keokuk, Iowa.

I FIRST wish to report a post-mortem, which I have denominated Case 1, although no operation was ever performed on this patient.

CASE 1.—In 1895 I was called to see Mrs. McK., who gave a history of pain in the right lumbar region of eleven years' standing, but was able to be about and do some work until the last four months. She was greatly emaciated; skin was deeply bronzed, like one in the last stages of carcinoma; the liver seemed greatly enlarged and extending to the crest of the ilium; fever was constant; examination of the urine was negative. She urged operation, which was refused, owing to the fact that she seemed to have but a few days to live at the most. She lived about one month after coming into my hands. Post-mortem was made within a few hours after death, and an enormous pus sac, occupying the capsule of what was once the kidney, was found. This contained at least two quarts of pus and a stone weighing one thousand grains. The pus cavity extended up high behind the liver, which was displaced downward and forward. This woman, whose condition was never recognized during life, could have been relieved of her pain and her life spared for many years by timely surgical interference. This case has largely influenced my course in dealing with pyonephrosis from any cause.

The following three cases, treated within the last two and one-half years, may be of interest to some; hence the report. I am at a loss to know why nearly all of my cases of movable kidney, hydro- or pyonephrosis, involve the right kidney. Occlusion of the ureter explains the result of the urinalysis in the post-mortem case. All other organs were found healthy.

CASE 2.—Mrs. Louis Presser, American, aged thirty-one years, April, 1898, applied to me for treatment. Complained for the last three years of dull pain in the right lumbar region; found a tumor below the costal border on the right side, extending to the median line and below to the crest of the ilium, smooth and tender; immovable; passed up beneath costal border to near spinal column; urine loaded with pus; no bacilli could be found in the urine; fever of low grade constantly.

Diagnosis.—Pyonephrosis with tuberculosis as probable cause of the renal disorganization and ultimate mixed infection.

Treatment.—Through lumbar incision I opened and drained one and one-half quarts of pus and tubercular matter. Renal disorganization was

complete. Recovery was very tedious. December, 1898, she presented herself at my clinic and desired to have the renal remnant and capsule removed. She had gained twenty pounds, and was in good condition. Drainage annoyance and pain for the past month was considerable, and it was on that account that she desired operation. Owing to the great size of the sac and dense adhesions, its removal was effected with considerable difficulty. It extended far up behind the liver, inward against the spinal column and below to iliac crest. The incision was an extension of the old one in the usual oblique direction. The peritoneum was opened accidentally at one point for about one and a half inches, but was immediately closed with catgut, and caused no trouble. Owing to the great depth of the pedicle and the difficulty of reaching and securing it with ligature, it was caught with a long, angular pedicle forcep, which was left in place for twenty-four hours. Recovery was without incident, and she left the hospital in three weeks with considerable drainage from the cavity, which had not entirely closed. Eleven months later she again reported at my clinic, complaining of a slight discharge from a small persistent sinus. This was dilated, followed as far as possible, and thoroughly curetted and cleansed. It quickly closed and remained so, to the last report, one year later, when it was making no trouble. She was enjoying good health, as she had been all the time since the enucleation.

CASE 3.—Mrs. I. S. Buzzard; American; aged twenty years; mother of one child. Applied to me for treatment December 18, 1899. While pregnant two years before was found to be passing urine frequently, which was loaded with albumin and from which it has not since been free; reaction alkaline or neutral; fever in afternoon for the past year, followed by night-sweats for the past four months; highest temperature noticed $103\frac{1}{2}^{\circ}$; pulse, 116; enlargement of right kidney; large amount of pus found in urine.

Diagnosis.—Pyonephrosis.

Treatment.—Oblique lumbar incision, through which a pint of pus was evacuated from perinephritic abscess. She left the hospital in eleven days.

March 31, 1900, was called to see her at her home. She had gained fifteen pounds in weight and is much stronger, but has for the past six weeks been having an unusual amount of pain. Sinus, which has been kept open, was dilated and enlarged by incision, the kidney was opened and pelvis explored, but no calculus was found. The organ was much softened and enlarged. Cordine drain was introduced and constant drainage maintained for four months; she now gained rapidly in flesh and strength and presents a better appearance than for several years.

December 10, 1900. Since last September she has passed but little urine through the lumbar drain, but occasionally considerable pus has been passed, with occasional rise of temperature and some pain; the discharge of pus has not been constant; electric illumination of the bladder

shows no indication of irritation about the left ureter. Nephrectomy was done and necrotic kidney removed; neither clamp or ligature was required; patient's pulse at the completion of the operation was 160. Three weeks later she was up and feeling well; three months later she was well to all appearances.

CASE 4.—July 31, 1899; Eugene Tinsman, aged twenty-four years. For one and one-half years has had albumin in urine; microscope shows pus in large quantity and no bacilli; pain severe for four months and almost constant; tumor plainly felt in right lumbar region, extending in front to within two inches of the median line and below nearly to the crest of the ilium; very slight mobility and extreme sensitiveness of tumor, with constant pyrexia; temperature 100° to 103° ; pulse, 100 to 120.

Diagnosis.—Pyonephrosis, probably of tubercular origin.

Treatment.—Oblique lumbar incision with examination and drainage of renal pelvis; no stone was found; one and one-half pints of pus was evacuated. Improvement was rapid and he left the hospital in four weeks. Drainage was maintained constantly until January 11, 1901, when, as he was again having some fever and more lumbar pain than usual, he desired removal of the kidney remnant. Old incision was enlarged and enucleation done with great difficulty owing to the large size of the mass and extreme density of the adhesions, together with the narrowness of the space. Stump was ligated in three sections with heavy silk; liver was bared for four inches. His endurance was taxed to the utmost, but he slowly rallied and left the hospital in six weeks, having gained in strength very rapidly in the last three weeks; cavity was closing nicely. Three months after operation he reports gaining rapidly in flesh and strength and that he is free from pain. He has a small tubercular sinus in the perineum which received no attention at all owing to his precarious condition.

In all of these cases the kidney was so far disintegrated that the patients would have been better off without it for many months before the removal was done. They were all in so extremely critical condition from prolonged sepsis and suppuration that I did not feel justified in doing more than evacuate the pus, providing and maintaining drainage. Case 2 has been well long enough to prove the wisdom of the course followed in her case. The other two are as yet too recent to determine as to permanency, but are sufficient to justify the plan followed in each. All three are alive, comfortable and able to do considerable work. I am convinced that if I had done the radical operation in all I would have lost at least two and perhaps all three cases. Two or even three operations to reach our ideal and enable us to save our patients are greatly to be preferred to one ideal operation and a dead patient. In all such cases I am, of course, in favor of the radical operation at once, if the patient's strength will justify. I am not in favor of removing a pyonephrosed kidney, one-half of which may be able to functionate, because very material damage to an only kid-

ney means speedy death; whereas, the aid of a half kidney on the other side may tide the patient over an emergency. A tuberculous family history and exposure was obtained from Cases 2, 3 and 4. Case 3, however, did not show it in her appearance or in the condition of the purulent discharge.

THE EYES OF OUR SCHOOL-CHILDREN.¹

BY ELLET O. SISSON, M. D., of Keokuk, Iowa,

Member Ninth International Ophthalmological Congress; Professor of Public Hygiene and State Medicine, Keokuk Medical College; College of Physicians and Surgeons, Keokuk, Iowa.

THE school statistics of our Census Bureau show that, during the years 1889-1890, there were in the various schools and colleges of the United States more than fourteen millions of pupils; and, when we consider that the larger per cent. of these are growing children, and that the greater part of childhood is spent in the school-room, the subject of the vision of these pupils becomes an important one.

An examination by Harlan and Wood of the eyes of the pupils of the public schools of Baltimore, during the session of 1895 and 1896, showed that of the 53,065 examined, 43 per cent. had normal vision in each eye, while 17 per cent. fell below the prescribed standard. In the last session there were examined 39,241 children; 16 per cent. fell below the standard, while 52½ per cent. had normal vision in each eye. It will be observed that the plan discovers only children with defective sight. Between these and those with normal vision in both eyes there were left in the first year 40 per cent. and the last year 31½ per cent. of all examined. The work of other American observers in the public schools of the United States shows similar results, and I will not take up time in quoting them.

It may be asked: What is the nature of the damage done to the eye in school life? and why does it occur at this period?

Briefly: damage is in the direction of producing near-sightedness, and produced near-sightedness is a diseased condition. It is a source of constant danger, and not infrequently after it has ceased to advance, the eye remains weakened and liable to destructive disease. Elongation of the eyeball, as is well known, is the change leading to near-sightedness. The outer coat does not obtain its full power of resistance until about the twelfth year, or even later, and during the last six years of this time the eyes are being used for near work. Near work increases pressure within and upon the sides of the eye globe, and certain refraction errors, notably astigmatism, demand increase of this pressure to give the child its best vision. Thus the danger of elongation is increased.

¹ Presented at the Ninth Annual Meeting of the Tri-State Medical Society, April, 1901.

Careful, repeated studies of individual cases have demonstrated that, for these cases certainly, the tender, readily yielding sclera of youth had distended under the strain and the probable increase of tension produced by the prolonged turgescence of the intra-ocular tunics, thus bringing about the observed increase in the refraction. The extent of myopia amongst the pupils of our public schools has been shown by careful and systematic investigation.

Risley's examination of 1212 pupils between the ages of six and twenty-one years, of various schools in Philadelphia, conducted in 1881, showed that 13.7 per cent. were myopic. In 1882, Mettendorf and Derby, of New York, examined 896 pupils of the grammar grade, with the result that 13.5 per cent. were found to have myopia.

If, then, we come to regard increasing refraction in the human eye as a manifestation of disease, the figures in the school-room statistics acquire a vital significance when viewed from the standpoint of school hygiene.

In view of the results obtained by these investigations, we have impressed upon us the necessity for a systematic examination of the eyes when the child is brought for admission to the school. One of the first questions should be: "Have your eyes been tested?" If answered in the negative, such investigation should be urged upon the parents, or made at the time by the teacher or some person detailed for this duty and instructed in the proper methods of examination.

For this purpose professional training is not necessary. The requirements are so simple that any teacher should be able to determine whether the acuity of vision is normal or not. All that is essential for the purpose is, first, a chart of standard test letters and a few simple instructions as to its employment; second, a small card of clearly printed $4\frac{1}{2}$ point (diamond) type and a metre or foot-rule. The test letters should be placed in a good diffused light, preferably falling upon it from the side, and the pupil stationed at a measured distance of six metres or twenty feet. He should then be required to name the smallest letters which can be called correctly with each eye separately. The nearest point at which the diamond type can be read clearly should then be determined. On the back of the cards should be printed a table showing the normal near-point for an emmetropic eye at all ages from six to twenty years, together with simple instructions as to the manner of determining it. If the sharpness of vision should prove to be much below the normal, or if the near-point is found too remote for the age of the pupil, admission should be granted only after apprising the parents or guardian of the existing defect of vision and the consequent need of professional advice. Such inspection would at once eliminate all those pupils with considerable errors of refraction, with corneal opacities, or with serious pathological conditions of the fundus. If, at the beginning of the school life, these congenital anomalies of refraction could be carefully corrected by suitable glasses, we should hear much less complaint of the harmful influence of the schools upon the eye-sight of our children.

Among the reforms that suggest themselves is the necessity for a more elastic curriculum of study, which will allow the attendance of partially disabled children without demanding of them the urgent pursuit at the same time of all the branches of study required of the class to which they belong. It is possible that some system of certified proficiency in as many studies as the individual is able to master safely, might be adopted even in our public schools. The time of their school life might be lengthened out by a year or more.

Another evil that ought to be and could be easily corrected is the work required to be done at home by the pupil in the way of preparing his lessons. This is usually done after night and very often by poor light.

Again, there should be frequent breaks in the continuity of the work done in the school-room. Since the strain upon the eyes is greatest at near work, it should be so arranged that the blackboard and wall map exercises, oral instruction, lectures, etc., should frequently interrupt the studies which require close application in reading and writing, and that the school session should be broken by short recesses passed in the open air, or by gymnastic exercises, marching, etc. Another evil to be deplored is the system of term examinations in vogue in the schools. Sudden relapses of choroidal disease with an increase in refraction brought about in the eyes of patients after this spasmodic exertion in preparing for examinations have been observed frequently, and this, too, after the steady work of the term has been accomplished without harm. The lighting of school-rooms is a subject that, we are glad to be able to say, has received much attention from hygienists and architects within the last few years. The light should be admitted from the left side of the pupils, and the ratio of the window surface to floor surface should never fall below one to five, and this should be exceeded in many localities, on the north side of the buildings and on the ground floors.

The seating of school-children is of the greatest importance, as much harm can be produced by improperly constructed seats and desks, and much good can be accomplished by properly constructed ones. In connection with the seat and desk there are three points of importance to consider: first, the height of seat from the floor; second, the distance of desk from seat, and third, height of desk.

The following quotation from an article by Dr. Risley expresses clearly the means by which these relations can be correctly maintained: "The arrangement of seat and desk must be such that the child will find it easier to sit upright at his work than in any other position he can assume in the seat. To secure this the seat must be of such a height as to permit the soles of the feet to rest upon the floor. The measured distance will be the same as that from the sole to the inner bend of the knee. The seat must be as wide as the thigh is long, measured from the inner bend of the knee to the back, and should be slightly concave to prevent sliding forward, but should not be inclined either backward or forward—*i. e.*, it

should be level. The front edge of the seat should be placed from one to two and one-half inches under the inner edge of the desk. This is known as the minus distance."

This latter term applies to the horizontal distance between the front edge of the seat and the rear edge of the desk. Seat and desk may have three possible relations. The seat may extend under the desk, minus distance; the front edge of the seat may be in the same vertical line with the rear edge of the desk, nil distance; or there may be a space between the seat and edge of desk, plus distance. Nor is it a matter of indifference or convenience which of these relations is obtained. The plus distance is to be avoided. Dr. Risley thus describes its dangers: "To work at a desk so placed, the pupil is compelled to reach forward. To do this, he perches himself on the front of the seat, while the feet are carried backward under it. The trunk falls forward, and finds support upon the elbows, one or both of which rest upon the desk. If but one, the left is used for support, while the right is employed as in writing, the vertebral column is partially turned on its long axis, and the entire trunk held in a distorted position, which we may well believe is conducive to the production of spinal curvature in growing children. In this forward pose of the trunk the head is no longer supported by the spine, and must, therefore, be upheld by the muscles of the neck, which should be required only to balance the head. They soon tire, and the work then falls upon the muscles of the back, which in turn give up the task and the head falls forward toward the work, while the trunk sags forward and downward between the shoulders, which are upheld by the arms, the elbows being supported by the desk. The face is brought too near the page and the left eye nearer than the right. The normal relation between the plane of the face and the work is thus disturbed, which, together with the abnormal near-point, adds greatly to the strain upon accommodation and convergence."

Of no less importance than avoidance of this plus distance of the seat is the height of the desk. If too high, there is the same abnormal nearness of the face to the work, with consequent strain on accommodation and convergence; on the former, to enable the child to see the print; the latter, to keep the eyes fixed upon the work. At the same time the arm in writing is thrown too high, with consequent distortion of the back and unnatural position of the body.

In conclusion, let me say that the points brought out in this paper are not new, but are ones that have been discussed by hygienists and specialists in the various departments of medicine for years; but that does not lessen their importance, and that there is great room for improvement along the lines suggested, no one will dispute. Each year sees our educational system becoming a more potent factor in our civilization, and with the increasing demand for higher education in all departments, we must not lose sight of the importance of the necessity for physical perfection as well as mental.

THE PRACTICAL APPLICATION OF THE X-RAY IN FRACTURES AND DISLOCATIONS.

BY J. RUDIS-JICINSKY, A. M., M. D., M. E., of Cedar Rapids, Iowa.

THE X-rays have become an accepted diagnostic agent in all fractures and dislocations. A work on surgery without full credit to the diagnostic advantages of the X-rays, especially in this branch, would not be up to date. To speak about their value in fractures and luxations, in honest and capable surgical hands, is not necessary any more. They are not only valuable in corroborating the status præsens discovered by the usual methods of diagnosis, but at times, by their aid, we can discover lesions not recognizable by ordinary methods of examination. It is now, in view of advancement in this diagnostic measure, within the power of every physician, especially in the country, to be his own consultant and frequently correct his own mistakes, which would not, and could not, perhaps, be recognized until too late. This being possible, it gives us, besides that, a correct record of our procedure during the whole case of the treatment, if we wish to, and may protect us in every case. Such a diagnosis every one of us should know, not only because it is absolutely reliable, but that there is a danger that improvements in specialization may limit our personal accomplishments in diagnosis, and we could not depend on ourselves but somebody else.

Very early in the history of the X-ray it was found that we have to deal only with the shadows, with all the limitations which the term implies. By repeating experiments, research, facts, experiences, better apparatus and better technique, we are now able to photograph not only the shadow of the bones, but the substance of the same, and do work that is much more successful.

There has been much written about the fallacies of the X-ray, tending to push aside this new method of diagnosis; but how about microscope, ophthalmoscope, or any other delicate instrument? You have to look until you see something; and in fact, to the unpracticed eye, the microscope or ophthalmoscope is much more liable to lead one astray than the very simple application of the X-ray. To practice medicine, we had to study; to manage an individual case of typhoid, we have to read; to operate in a difficult case, we have to look up our authorities, etc.; and to manage the new means of diagnosis, the X-ray, we have to study just as well.

It is very simple, indeed, to get hold of the handle or switch and produce the X-ray with the help of the coil or the static machine, but it is really very difficult to manage the same and to know what to do in some cases, when the fundamental laws and principles of the electrology and radiology are not understood. And let us state right here, that such and similar nonchalance was the main cause of misrepresentations and many

mistakes in the beginning of the X-ray phenomena, attributed falsely to the X-ray, instead of to the operator himself.

Know your technique, your apparatus, your Crooke's tube and the power of your X-ray; the distance of the tube from your object; the distance from the photographic plate, which must be as near as possible to the part examined, remembering that the shadows which are seen most beautifully correspond exactly with the radiation from the disk of the platinum in the tube; know and regulate the duration of exposure, and mark the angle at which the picture is taken. If you wish to make a correct diagnosis and produce an accurate skiagraph, you must never be satisfied with one picture of the case, but make it also your duty to produce different skiagraphs from



Gunshot Fracture. On examination, fracture of the orbit and Mauser bullet lodged under the left wing of the sphenoid. Skiagraph shows plainly the meningeal grooves, the internal structure of the bones of the head, and locates the bullet correctly, if we take into consideration that the sutures show plainly. They could serve us as the landmarks.

different points, comparing the same, of the injured part with the normal one. Our work must be rapid, exposures short, and the patient protected. To read correctly the lesson of an X-ray picture, know your individual case, your anatomy and pathology; keep the obliqueness of the X-rays in mind and make the skiagraphs as nearly life size as possible, to get sharply defined outlines, using a proper dividing screen for measurements and exactness of your negatives. Then you will make sometimes skiagraphs which really will be most wonderful, will secure you the best consultants, will protect you for the future and show you what to do in the proper way.

The bone relationships in joints, the various joint movements, dislocations in what direction, fissures, true, "green-stick" fractures, depres-

sions, separation of the splinter or apophysis, the direction and character of the line of the complete fracture, transverse, oblique, longitudinal, V or T shaped and comminuted, the seat of the fracture, as to the neck, head, shaft, separation of the epiphysis, or if extended into a joint, multiple, compound or gunshot fractures can all be studied in striking way with the help of the X-ray, and the different steps in bone development or repair observed. In regard the callus formation and functional ability, in many cases the X-ray tells us the truth and will teach us to do more honest



Dislocation of the Femur at the Hip-joint. The head forward and downward. Railroad injury. Diagnosed as fracture of the neck of the femur. The structure of the bone is normal. The marrow of the femur may be plainly observed. Shortening of the limb, two and a half inches.

and successful surgery. When the proper conditions and positions are known, the X-ray cannot mislead; its revelations are correct and infallible.

To prove this assertion I have selected skiagraphs of my own, the results of actual cases and the diagnosis made. The exposure in all my cases was very short—seconds instead of minutes. The difference between the skiagraphs taken years ago and now is most marked in the case of the hip-joint, diagnosed five years ago as coxalgia, and showing, as you see very plainly, in substance and internal structure, healthy bone tissue on our

skiagraph and a simple dislocation of the head of the femur, never reduced. Without the X-ray we would hardly make the diagnosis now.

There is no question about it, that you may deceive the sense of touch, but not so easily the eye, supported by some measure which is absolutely unerring in its diagnosis. It is said "that in few cases of fractures the X-ray will give no information which we are unable to obtain by any other method, but in a large majority of the cases of fractures we are able, as said, to determine by physical examination the exact condition of affairs just as readily as we are able by means of the X-rays."



Dislocation of the Radius and Ulna at the Elbow-joint. Complete. Reduced with the help of the fluoroscope. Depressed under same conditions, and final results excellent. No loss of function. In this, as in other cases, tungstate of calcium screen used to get the internal structure of the bones.

Every expert and surgeon will be very much surprised at such a statement, knowing that fracture of the styloid, for instance, occurs in four out of five cases examined for Colles' fracture. This condition of affairs never could be made out by cruder methods. In children you cannot recognize the normal or abnormal membral epiphyses, the growth of the bones and their exact relationships, if they are altered by disease or trauma, but the X-ray findings in these cases are marvelous and correct. If there is a fissure fracture, even with close approximation, the X-ray will always show

the fissure; but the exact condition might not be made out just as readily by physical examination, which gives pain to the patient, or discomfort at least. With the help of the X-ray a local cranial wound may be much better examined than in the usual way. If fracture exists, whether it is simple, compound, or complicated with fissuration or depression, is determined with the fluoroscope in five to ten seconds, or skiagraph may be taken, without any aggravation of pain or any danger of complication to the patient. In impacted fractures the diagnosis is impossible in any other



Fracture of the Femur Between the Middle and Lower Third. Impacted. Shadows, which are both shadow and substance, giving internal structure of the bones with a wonderful depth and perspective. Case skiagraphed immediately after the injury, fragments set under fluoroscopic examination and the patient is now well. There is no shortening.

way without great damage. The X-ray may also point out when reduction and coaptation can be effected, or when operation should be done.

But the main thing! With the help of the X-ray we will make correct diagnosis through the preliminary dressing, take the same off when the diagnosis is made and reduce the dislocation, apply proper dressing and observe constantly during the whole procedure our work until complete. In a case of fracture, we put the fragment together and apply the splints, and through them carefully observe the result of our work; may

change the position of the fragments, if necessary, and apply our final dressing when the fragments are fixed. The dressing need not be changed until necessary, and we may further observe through the dressing the growth of the callus, how the union of the bones is taking place or not, or photograph through a plaster of Paris overcase, after an attempt at reduction, and see if proper approximation of the fragments has been accomplished, and find sometimes, perhaps, that the union did not and could not take place. This, under no circumstances, could be made out by other means of diagnosis. Or, if we have a case of suspected fracture or dislocation, or both, where the swelling will not allow any digital examination on account of the pain or the inflammation which masks the true condition, the simple application of the X-ray at once reveals the status præsens, without any discomfort to the patient and great satisfaction to the surgeon.

"It has been the observation of every railroad surgeon that it is quite impossible sometimes to form a correct estimate of the amount of destruction suffered by the tissues and bone, especially in a railroad crush, when the patient is laboring under a great shock or pain." Lord! But with the help of the X-ray we may see every particle of the crushed bone through the preliminary dressing and determine if amputation is necessary. Skiagraphs in such cases, taken soon as possible after the accident, and again after first dressing, and again when the patient is discharged from the care of the surgeon, leaves the record complete. A skiagraph of a stump may sometimes be also very interesting and useful. Such a method of correct diagnosis and the whole procedure in each individual case would be the only just solution of contention between employer and employed. And all this is done without general anæsthesia. How often is the operation really of secondary importance as compared with the dangers of anæsthesia in such and similar cases? With the facts before each party to the case, clear and unmistakable to both, is it not reasonable to think that litigation would diminish and enmity vanish?

The value of the X-ray in fractures and dislocations, together with all the necessary accessories, cannot be disputed any more. If you wish, the negative will give you the internal structures of the bones with a wonderful depth and perspective, and you will have the picture of the substance, not only the shadow, of which still so many surgeons are afraid. In such cases I use the tungstate of calcium screen over the photographic plate, and get shadows which are both shadow and substance, which, if we do understand them and intelligently interpret them, will always bring us to correct diagnosis. But, if we choose, we may try our sense of finger-touch and determine the condition of affairs the old way, or be protected and be sure by means of the new way.

OUR DAILY BREAD.

BY GEORGE HOMAN, M. D., of St. Louis, Mo.

A COMPREHENSIVE definition of bread is worded as follows: An article of food made of the flour or meal of grain, mixed with water or milk and salt, to which yeast, baking powder or the like is commonly added to produce fermentation and rising, lightness or sponginess, the mixture being kneaded and baked in loaves or as biscuits, rolls, etc.¹

It is stated that the most primitive way of bread-making was to soak the grain in water, press it, and then subject it to heat. This was improved upon by pounding or braying the grain in a mortar or between two stones before wetting and heating, and some etymologists would derive the word bread from this braying operation.

The development and refinement of this process may be said to constitute one of the chief marks of advancing civilization, and in no particular has the cooking of food received more attention than in the preparation of bread. The need of this form of aliment is so pronounced in peoples who have emerged from the savage state that the name has stood since the earliest records as a synonym for food in general, the adherents of the Christian religion, for example, being enjoined to pray that they may be given, day by day, their daily bread; and as such it typifies the fundamentals of animal life, meeting some of the primary physiological demands of the body, although not in itself a complete food.

In all the more advanced nations the flour of wheat is used in the making of bread, and the proper milling of the grain is necessary for the twofold purpose of reducing it to a powder and of excluding the coarser and indigestible parts.

While the richness in quality of the grain in the world's wheat-growing regions increases toward the equator, still after the evaporation of the contained water the mean composition of an average quality of wheat may be stated in percentages as follows:

	Per cent.
Gluten and albumen.....	13.5
Starch.....	54.5
Gum, sugar, oil and fiber.....	30.
Saline matters.....	2.

Taking the weight of one hundred kernels of wheat as 3.87 grams, the Chief of the Division of Chemistry, Department of Agriculture, has recently stated the constituents of that quantity of grain in the following form:

	Per cent.
Moisture.....	10.62
Proteids.....	12.23
Ether extract.....	1.77
Crude fiber.....	2.36
Ash.....	1.82
Starch and sugars.....	71.20

As mentioned in the definition of bread given above, the three absolute requisites for the making of good bread are (1) flour or meal, (2) yeast or leaven, and (3) water containing salt; the first furnishing the important food constituents, proteids, starches and ash; the second by gaseous evolution distending or raising the dough, and thus enabling the applied heat to act most efficiently; while the water and salt are necessary to form the dough-mass and impart savor to the finished product.

The mere assembling and mixing of these materials, even though of the best quality, does not assure a wholesome article of bread; for, besides the requisite skill for preparing the dough, its proper baking is an equally important factor, and is perhaps the least well understood of the two.

The means or agents employed to leaven the dough are of prime importance, and their relation to the desired end should be clearly comprehended.

Yeast or leaven is a ferment known from earliest times, and is added to give a start to the fermentative process through the action of its enzymes on the gluten, starch and sugar of the flour, thereby supplying carbon dioxide, which imparts a spongy texture to the bread.

Yeast consists of microscopic vegetable organisms which, when placed in a suitable medium, grow rapidly, producing alcohol and carbonic acid gas. The evolved gas, in attempting to rise, becomes entangled in the meshes of the dough, distending it and making it light. After the dough has risen sufficiently it is placed in a hot oven to bake. The heat destroys the yeast plant, and thus prevents further fermentation. If the growth of the yeast be allowed to continue for too long a time, acetic, lactic, and butyric acids are formed, and such dough makes "sour bread."²

The minimum temperature of an oven for bread-baking is placed at 320° F., and the maximum may reach 570° F. The action of the heat dissipates much of the water from the dough, distends the air spaces more fully, steams or boils the starch and gluten in the dough, develops some gum from the starch, and when yeast has been used, as before mentioned, destroys the yeast plant.

However high the temperature of the oven may rise, that of the interior of the loaf cannot be much, if any, above 212° F.; so that essentially the cooking of all but the crust of the loaf is the effect of the action of moist rather than dry heat, and the baking process must be continued for such length of time as may be required to accomplish the transformation of the raw starch, etc., into a form fully acceptable to the human digestive functions; and this implies a period depending, of course, upon the size of the loaf, and the temperature of the oven, the formation of dextrine being a very important part of the process.

The following is a correct description of the general qualities of good bread: Good bread has a thick, fragile crust, which is not burnt, and which forms from twenty to thirty per cent. of the weight of the loaf. The crumb is white and filled with cavities, the partitions between which

are easily broken down. These cavities should be distributed through every part of the crumb; otherwise the bread is sodden and heavy, and decomposes quickly. The bread should be of a pleasant odor and taste.*

Besides the use of yeast for raising bread, other substances are employed which by chemical action set free carbon dioxide and thus distend the mass; and their convenience of use and rapidity of action have contributed largely to replace yeast for this purpose in domestic use at the present time in the preparation of the more quickly extemporized forms of bread.

The employment of saleratus with buttermilk, or other acidulous milk, was the forerunner of the baking powder, which now plays such an important part in the commercial world, as well as in the economy of the domestic *menage*. They were first used in this country, perhaps, forty years ago, and the practical development of the idea involved in their preparation was due to American enterprise. While there are several different substances and combinations used by baking powder manufacturers, the object sought by each is identical: that is, by the reaction of bicarbonate of soda and an acid salt mixed in the flour to generate carbonic acid gas by the addition of water and thus quickly inflate the mass, this process being aided by the heat of the oven.

Domestic experience had gradually developed the buttermilk-saleratus combination for raising biscuits, rolls, etc., but the difficulty always confronting the cook was to correctly proportion the two ingredients, as the weak lactic acid of the milk did not always neutralize the amount of alkali presented, and the result was a product with an interior of a saffron hue, mottled with dark spots, and of a more or less soapy, alkaline or bitter taste.

Curiously enough, the confirmed digestive derangements often attending the eating of such forms of bread were attributed to the fact that they were consumed while hot, and even to this day some physicians may be found who inveigh against the use of hot rolls or bread, as if the mere temperature was the cause of offending rather than the faulty making or imperfect baking—these inducing in the partaker fermentation, flatulence, gastric distress, and other unpleasant symptoms. A compacted bolus of such bread when swallowed presents to the digestive power of the stomach a serious task, as it can be acted on but slowly and disintegrated with difficulty, thus giving rise to pyrosis, eructations, and other manifestations of laborious and imperfect digestion; and if the baking alone be at fault, this holds true of bread made with any kind of leavening whatever.

It was with the object of furnishing an agent that could be kept on hand ready for immediate domestic use that the baking powder industry came into existence, and that a popular want has been met would appear to be proved by the magnitude of this branch of trade at the present time. Therefore, it becomes necessary to consider the influence of these products in the preparation of an article of food so important as bread, and

to inquire into their possible or actual ill-effects on the health of those who use bread into the making of which this form of leavening enters.

As already indicated, the only object sought in using leavening agents is the inflation of the dough-mass; and this end is attained with (1) yeast as a result of a vital process; (2) with certain substances as a result of their mutual chemical action; and (3) it may be reached by mixing the flour with water charged with carbonic acid gas, or by inflation of the dough by some simple mechanical agent, as a pair of bellows, for example—the means to be adopted in the average kitchen depending on facility of use, relative inexpensiveness, efficiency of action, and satisfactoriness of result in appearance, palatability, wholesomeness, etc. In the ordinary domestic *menage*, baking powders appear to offer these advantages in a superior degree, and therefore the substances which enter into their composition and the method of their manufacture claim public as well as professional attention, in view of the vast development of the business within the last twenty years.

There are three principal combinations of chemical substances used in the manufacture of baking powders, these being known to the trade as straight alum powders, phosphate alum powders, and cream of tartar powders; and the average composition of these several products may be stated with approximate accuracy, omitting fractions, as follows:

STRAIGHT ALUM POWDERS.

Soda-alum	20 per cent.
Soda bicarbonate	20 “
Corn starch	60 “

PHOSPHATE ALUM POWDERS.

Calcium phosphate	18 per cent.
Soda-alum	18 “
Soda bicarbonate	26 “
Magnesia carbonate	1 “
Corn starch	36 “

A small percentage of tartaric acid is also added to this formula.

CREAM OF TARTAR POWDERS.

Cream of tartar	55 per cent.
Soda bicarbonate	25 “
Corn starch	20 “

It may be explained here that in all of these formulas the starch is added simply for the purpose of separating the active ingredients, thus insuring the good keeping quality of the powders, and favoring their more equal reaction when used. In trade language it is termed a “filler.”

In the last two formulas a small percentage of albumen is added to increase the glutinous quality of the dough, and thus favor the action of the liberated gas.

It being borne in mind that the sole purpose of these several combinations is the lightening of dough by means of the freshly evolved carbon

dioxide, and as it is not charged that this gas is injurious to health when employed in the preparation of food, it remains to be seen whether there are any by-products or secondary combinations against which such a charge may fairly be lodged.

In the first two formulas alum holds a leading place, the variety stated to be preferred and used for this purpose being soda-alum, as distinguished from the other kinds, known as ammonia-alum and potassa-alum. The alum used in these two combinations is *alumen exsiccatum*, or alum from which the water of crystallization has been driven by heat, thus losing nearly half of its weight and appearing as an opaque white powder, somewhat resistant to the action of cold water.

The obvious aim of the manufacturer, in order to secure a satisfactory product, must be to so proportion the amount of alum and bicarbonate of soda that they will both disappear as the result of the reaction which takes place when used in bread-making; for upon success in this respect must depend to a very considerable extent his ability to please his customers—in short, to do a successful business.

The combining proportions of pure soda-alum and pure soda bicarbonate are as forty-eight to fifty, and no residue will be left; but as found commercially, these substances usually contain some impurities, and this fact must always be taken into consideration.

Soda-alum being a double sulphate of sodium and aluminum, the evident secondary combinations possible in the case of the first and second formulas, failing a correct proportioning of the constituents, would be sulphate of soda (Glauber salts) and aluminum hydroxide, the acid element for the production of carbon dioxide being furnished by the aluminum sulphate. But in the case of the third formula the reaction of the acid and alkali constituents would secondarily produce sodium potassium tartrate (Rochelle salts); and in both instances, if these combinations were present in any quantity in the bread, the well-known bitter taste of these two familiar salts would give sufficient warning to the consumer—and as a matter of fact, such flavoring was not uncommonly met with in biscuits and rolls made with the *saleratus*-buttermilk combination; indeed, it is sometimes encountered now in forms of bread made with any kind of baking powder. While such a taste is, of course, foreign to good bread, and must be pronounced most objectionable, still the substances responsible for it could hardly be considered harmful, as at most they would be unlikely to have more than a slight aperient effect in those consuming such bread.

The combination known as aluminum hydroxide or hydrate or terhydrate, possible when alum baking powders are used, is described as a light amorphous powder, devoid of odor and taste, insoluble in water or in alcohol, but soluble in solutions of the acids and the alkalies. It is a mild astringent and desiccant, and, when freshly precipitated, clarifies the liquid in which it is contained by withdrawing from it dissolved matter, both organic and inorganic.⁴

Litigation, in the course of which the chemistry of baking powders was exhaustively gone into by scientific experts, with especial reference to the question of the effects of alum on the human system, was begun in St. Louis late in 1899 as an outcome of legislation enacted by the General Assembly of Missouri the same year, which prohibited "any person or corporation doing business in this State to manufacture, sell or offer to sell any article, compound or preparation for the purpose of being used or which is intended to be used in the preparation of food, in which article, compound or preparation there is any arsenic, calomel, bismuth, ammonia or alum," the minimum penalty being fixed at one hundred dollars.

While the influences which procured this legislation were not publicly evident at the time of its enactment, the interests controlling and owning the cream of tartar baking powder business appeared conspicuously in the prosecution of the first case instituted under the law, and they spared no pains or expense in order to secure a conviction, the reputed inroads on their business by their competitors presumably prompting this course, as the market price of the alum powders is about one-third that of the cream of tartar powders.

The style of the case was State of Missouri, plaintiff, vs. Whitney Layton, defendant; and the fact that the defendant was engaged in the manufacture and sale of alum baking powders was not denied, the defense resting on the asserted unconstitutionality of the law and the harmlessness of alum baking powders. In the course of the trial a great amount of expert and *ex parte* testimony was heard—chemical, medical, physiological, etc.—many of the most eminent chemists in this country being present, the efforts of the prosecution being vigorously exerted to show either that free alum was present in the bread or that harmful aluminum compounds were formed when alum baking powders were used, the substance called aluminum hydroxide being especially pointed out as of that character.

Without undertaking to review the great body of testimony offered and bearing on these points, it will be sufficient to quote from the decision of the trial court in giving judgment in the case. After commenting on the contention of the prosecution that hydroxide of aluminum was deleterious and the testimony offered by eminent experts as to its theoretical effects, attention was called to the fact that but one witness presented any report of experiments (which were performed upon himself), and these showed that single doses of not less than twenty grains were required to produce any appreciable effect. The testimony of all other experts who testified for the prosecution rested purely on a theoretical basis, and though it appeared that hydroxide of aluminum was a substance easily accessible and which could have been made the subject of practical experiments by the various eminent scientists, yet they were without a single practical test except the one mentioned, and were without a basis of actual determination upon which to found their theory. The court continued:

"Upon cross-examination the experts testifying for the prosecution admitted that in all their reading and information they possessed on the subject they had never themselves come in contact with, nor could they obtain any information or any knowledge of, any recorded instances in which functional disorders or disease or impairment of the digestion and general health had resulted to any human being from the use of alum baking powders as an ingredient in the preparation of food. In the mind of the court this fact, considering the enormous proportions to which the alum baking powder industry has grown in this country, and the length of time in which such baking powders have been in use, stands as a stone wall against the deductions of the most eminent scientists who presented their theories on the part of the prosecution. I am unable to find in the evidence presented in this case any just ground for a ruling that alum baking powders, of themselves, when used in the preparation of food, are in any way less wholesome than any other variety of baking powders."

There can be no doubt of the fact that a strong public prejudice exists against the use of alum in bread-making, but this prejudice originated in times when breadstuffs were much dearer than now, and when alum was deliberately employed for the purpose of whitening the loaf, thereby enabling an inferior flour to be used, as well as to increase its weight in contained moisture, thus perpetrating a double commercial fraud which very properly was the object of restrictive legislation. A dietary cheat also attended this misuse, inasmuch as the phosphates of the flour were rendered less soluble, if not insoluble, in the stomach.

The fundamental distinction between this fraudulent use of alum and the purpose of its presence in baking powders to-day will be obvious from what has already been said; but that the justly grounded prejudice arising in other days has been shrewdly taken advantage of by the cream of tar-tar powder people to discredit the product of their business rivals cannot be doubted, and in the legislation obtained in furtherance of their ends no small degree of craftiness was displayed in putting arsenic as the leader and alum as the wheeler in the tandem driving of alleged statutory poisons.

Ancient history tells that a certain king was wroth against two of his officers, the chief of the butlers and the chief of the bakers, and threw them both into prison, where they lay for three days, after which time the king restored the butler to his honors, but he hanged the chief baker. The counts in the indictment against this offender are not given in the narrative, and while commentators may differ, it must be evident to medical men, who may read between the lines, that incompetency or negligence in his work must have been the crime which outraged the stomach and roused the dyspeptic wrath of his master; and it is not too late even now to pay a deserved tribute to the worth of one who was no mean man nor inconsiderable ruler, for his action clearly showed that he possessed the quality of penetrative sagacity to discover the cause of the mischief, and the courage to fit the penalty to the crime. Should we ever happen upon the mummy

of this Pharaoh, let us not withhold a tear to his memory and indulge the hope that emulators of the example set by this kingly soul may arise even in these degenerate days. For who of us, when confronted at table with sour, leathery, sodden or tasteless travesties on bread, has not hanged the baker—in our mind?—but we have not dared to go any further than that.

As already pointed out, even if all the elements of bread be of the best quality, and the mixing also be without fault, still if the baking be not equally perfect as to stage of leavening and time of exposure, failure must ensue. Doubtless much of the gastric distress and fermentation, with acid eructations, heartburn, etc., in persons of weak digestion, may be traced to the eating of breads not baked sufficiently to kill the *saccharomyces* where yeast leaven has been used; and a long train of evils may with equal truth be ascribed to the unchanged starches consumed in forms of bread where heat at a proper temperature has not been permitted to have its full ripening effect upon the loaf.

The custom, perhaps, in the average kitchen is to hurry the pans into the oven and whisk them out almost as soon as some singeing or scorching is apparent, the usual fault being a too high temperature with insufficient time of exposure for penetration of the heat throughout the interior, which is absolutely necessary to secure transformation of the starch with the formation of dextrine, on which the savor and aroma of bread depends and which adds so greatly to its palatability and digestibility. In fact, true panification is impossible otherwise.

It is, therefore, incumbent upon those who denounce alum baking powders as being hurtful, to point out clinically recognizable disease caused by such powders, and at the same time to be careful not to confound therewith forms of gastric ailment which existed long before such powders were known.

A recent writer⁵ has directed attention to several points in connection with bread and bread-making that are of interest and importance. As to the extent of this business, he says that during the twelve months ending June 30, 1899, 268,868,281 bushels of wheat were used in the United States for bread-making, this amount equaling 16,132,096,860 pounds. The waste in milling wheat (bran, etc.,) is replaced in bread by water, so that practically a pound of bread equals a pound of wheat. The actual cost of this bread, placed upon the table, not to speak of the profits of the baker, is about three cents per pound; making the total value of the bread consumed in the period of twelve months in the United States, \$483,962,905.80.

Now, this vast sum of money ought to command a better article of bread than that commonly offered to consumers, and Prof. Wiley calls attention to the Schweitzer system, as he observed its operation in France. By this system flour is used from freshly ground wheat milled in a way to cause it to be more than doubly rich in phosphates and nuclein, which are largely destroyed by the roller process of grinding, and the fact of this

vital difference between the two flours has been demonstrated by means of actinographs.

Flour is subject to oxidization by exposure to air, and thus suffers impairment in its nutritive value, this being evidenced in part by the loss of its golden tint, which is one of the marks of a good article of flour.

The nitrogenous principles of wheat are composed chiefly of glutenin and gliadin, which, with water, form the gluten or tenacious element of the dough. In the Schweitzer flour, which is of a marked golden tint and granular, these principles are preserved, and the bread, which is also yellowish in color, is so palatable, nutritious and so aromatic that no other kind is desired. The writer above mentioned says: "In view of the enormous economic importance of the bread industry, it is not unreasonable to desire to see the quality of our bread improved. It is not at all an exaggeration to say that scarcely twenty-five per cent. of the enormous quantity of bread mentioned above is properly prepared or properly baked. The nutritive properties of the other seventy-five per cent. are diminished, its palatability decreased and its value lessened by improper panification, not to speak of the dyspepsia and other digestive disorders attending the use of poor bread. In the interest of health, economy and good living a reform in our bread-making processes is urgently demanded."

He adds that the domestic baking of bread is to be deplored; that bread badly made has not a leg on which to stand, and that an earnest effort should be made to relegate domestic bread-making to the past, and to substitute in every community bakeries under competent control, offering the best bread at the lowest prices.

From what has gone before, it may be not unfair to conclude that bread-mixing and bread-baking have not in this country, as yet, been generally perfected; that much of the nutritive value of flour is dissipated and lost in bread as ordinarily presented; that while the leavening of bread is an important part of its wholesome production, the particular agent to be selected for this purpose—whether of vital, chemical or mechanical nature—must be largely discretionary with the baker; that serious dyspeptic consequences may attend the use of yeast-raised bread, as well as that made with any other kind of leavening; that the efficiency of baking powders, as respects the purpose for which they are intended, is unquestioned, while it has not been shown by medical experience or expert testimony that more harmful results follow from the use of the alum powders than from other forms of baking powders; that a great conservation of economic and nutritive values seems possible from a better understanding of the art of milling grain, the care and treatment of flour thus produced, and the proper preparation and baking of bread from such flours, as evidenced by foreign experiment and extended experience.

[Published synchronically with "Courier of Medicine."]

LITERATURE.

¹ Standard Dictionary.

² Vaughan—Lomb Prize Essays, Am. Public Health Association.

³ "Healthy Foods"—Am. Public Health Association.

⁴ Encyclopedic Medical Dictionary.

⁵ H. W. Wiley—*Forum*, November, 1900.

NOTE.—The following description of the Schweitzer method of milling wheat and the production of bread is taken from a consular report to the United States government, published January 29, 1900. This report says that the flour is ground out in quantities sufficient to meet the daily needs of the bakery, and that the wheat when received is carried by an elevator to the top of the mill, and turned into the different cleaning and separating machines. The report continues:

"After all foreign substances have been removed and the grains of wheat have undergone a thorough brushing and washing, they are clean and shiny; but the grooves of the wheat sometimes retain a little dust. This is completely eliminated by a Schweitzer appliance, which, seizing each grain lengthwise, splits it exactly in the groove.

"The wheat thus cleansed passes into the mill, composed of flat, circular steel grinders, grooved in such a manner that they accomplish the decortication of the kernel and its granulation into meal at the same time. These grinders are movable, but do not touch; so that, instead of crushing the wheat and producing a flour in which the starch only is retained, the outer and harder portion of the wheat, containing gluten and other nutritive properties, is retained in the flour. The bran alone is expelled.

"Attached to the mill are the works for kneading the meal, water and yeast into bread. All this is done mechanically, the works being separated into three stories. Special yeast is prepared in the upper story in rooms heated in winter and cooled in summer. The yeast, flour, and the salted and filtered water are carried down by machinery into kneaders in the form of half cylindrical tubes, rotating on two pivots placed in the axis of the kneading-troughs, so that the tubes may be placed at a lower or higher angle, in order to accelerate or retard the kneading.

"One person can attend to two Schweitzer kneaders, regulating the distribution of the dough; and thus the kneading of 2000 kilograms (4409 pounds) of dough per hour is accomplished.

"The steel arms of the mixing and kneading machinery, some of which are stationary and others mobile, stretch and work the dough much better than hand power.

"The flour, salted water and yeast automatically enter one end of the tub, and dough in an endless skein of pale yellow issues from the opposite end. This dough finally falls on tables on the ground floor, where it is weighed and made into bread of every shape and dimension. Small wagons are charged with the shapes, which then go to the raising-room. Each floor has a fermenting-room, kept at an even temperature.

"The dough, after raising, is carried by wagons into the baking-room, where it is placed in Schweitzer ovens heated by gas from retorts arranged in such a manner that the gas does not enter the oven, and the heat is so regulated that the baking operation goes on automatically.

"In connection with this model establishment is a laboratory for the chemical examination of the samples of wheat submitted for purchase. These are, upon their arrival, ground and passed through a sieve by a small hand bolting mill, * * * which determines immediately the nutritive volume of the grain in gluten and nitrogenous matter."

This report also states that there are mills, ovens and kneaders of various dimensions, that may be worked by machinery or hand power. The latter system enables the farmer to grind his own wheat and make his bread from an unadulterated and wholesome product, and mentions that family bread produced by this system is rellied in France at the rate of about two cents per pound, which is nearly one cent less than the usual price.

The recent meeting of the Tri-State Medical Society at Keokuk was a most successful one. The attendance was large and the meetings were well attended. A feature of the meeting was the passing of resolutions concerning the passage of laws governing marriage. The legislatures of the States of Illinois, Missouri and Iowa will be petitioned to pass laws forbidding the marriage of individuals presenting mental or physical degeneration. A determined effort will be made by the individual members of the society to secure the passage and enforcement of these laws. Dr. Bayard Holmes delivered an address on "The Obligations Between the Medical Profession and the People." The doctor tersely mentioned the prevalence of "grafter doctors" nowadays, and the efforts that should be made to exterminate them. In short, the meeting was decidedly successful, and the different members returned to their homes and practices feeling that their time had been well spent in attendance on the meeting. The meeting-place for the coming year will be Chicago, and the time of meeting, April.



SCIENTIFIC MISCELLANY

The Problem of Sex.—A few years since, Dr. Schenk, professor of embryology in the University of Vienna, published a book which professed to show how the sex of a child might be determined prior to its birth. Notwithstanding abundant evidence that a highly albuminous diet tends, in the lower animals, towards female offspring, Dr. Schenk was bold enough to assert that the opposite was the case with man. So little support did he receive that the writer has been unable to find out the names of any of his followers. His doctrines were given to the world in a way which was considered objectionable by the faculty of the Vienna University, and the professor of embryology tendered his resignation. Being free to adopt any course he might think proper, Dr. Schenk has now imitated the patent medicine proprietors. He has published a "Compendium for Determining the Sex of an Unborn Child"—a work obviously intended for the laity rather than for the medical profession. The author attempts to show that the usual sex distribution—106 males to 100 females—is merely the result of normal assimilation of food by women. Famine, war and epidemics, which have an important influence on assimilation, cause, he says, decided changes in the proportion of male and female births. This is undoubtedly true, for, during times of famine in Ireland, an excess of male births has usually occurred as a result of a potato diet of limited quantity. But Dr. Schenk does not admit that a carbohydrate diet is favorable for male births, and he advocates the use of highly albuminous food for four months of pregnancy, if *male* offspring is desired. For ten consecutive days all carbohydrates are forbidden, and the liquids are reduced to three glasses of water a day, "with a little white wine!" Fear of a uric acid "storm," if nothing worse, does not seem to worry Dr. Schenk, and he assures his readers that his methods have been successful in twenty-one cases, in addition to fifteen referred to in his first book. Any woman, he believes, can carry out his ideas with the aid of the family physician. The male parent has no influence upon the sex of the child, according to Dr. Schenk, but he gives no clue to any experiments which have proved this hypothesis. For the present, the scientific world will

hesitate to endorse the ex-professor's views. The problem of sex is extremely obscure, and the investigation of the question by competent biologists has hardly been commenced.

The Brain of Man Compared with That of the Apes.—It is now recognized, of course, that man and the anthropoid apes are derived from a common ancestor; but the nerve-center which controls man's faculty of articulate speech does not exist in the apes, and, as a result, they cannot possess a power of speech identical with ours. Their intellects will, therefore, remain imperfectly developed. The defective anterior lobes in the brain of an ape are due to the small capacity of the animal's skull, caused by its ossification or consolidation during the first year of life into a rigid closed case, within which the brain cannot expand. An ape's brain, on this account, always remains an infantile brain. In man, however, the forepart of the skull does not consolidate until many years after infancy has passed, and so the anterior lobes of his brain, including the nerve area controlling speech, can continue to develop until he is almost twenty years old. But this cannot always have been the case, for the Neanderthal skull and the skull (found in Java) of the so-called *Pithecanthropus erectus* seem to be on the border-line between man and an ape-like ancestor, suggesting the idea that the expanding skull has been a congenital variation developed by the process of natural selection.

Although craniology has received a great deal of attention since Gall and Spurzheim made out their town-lot-like maps of a man's character; and although the motor-centers of the brain are now well known, the comparative anatomy of the brains of the various anthropoid apes and man has not yet appeared in print outside the technical books.

Referring to Gall and Spurzheim: how strange it is that many fairly educated persons still believe that an individual's character can be read by an examination of his head!

Alcoholism and Depopulation.—The population of France is decreasing, and alcoholism prevails to quite a serious extent. Is there any relation between these two facts? Such authorities as Pinard, Debove, Legrain and Jacquiel say that but for alcohol the population would be on the increase. Upon the other hand, Mr. Ovize, of Lyons, claims that alcoholism, although a very ancient habit, has never prevented the population of the world from increasing. Alcoholic excess, he says, has existed from time immemorial among the Hindus and Persians. The laws of Mann and Lycurgus prove the abuse of alcohol in their day; but, while alcohol was regarded as injurious to the individual, it was not considered injurious to the health of his descendants.

In spite of this, there are a number of facts which Mr. Ovize cannot deny. The first is that certain European life insurance companies, which insure total abstainers at a lower rate than moderate drinkers, are able to

show by statistics that the abstainers live longer than the "moderates." (This may be unpleasant information for some of us, but it is true.) Secondly, the birth-rate is at its minimum in Normandy, where the consumption of alcohol is high; and is at its maximum in those parts of France where the wine consumption is small.

Alcoholism may be said to use up the human race "at both ends." It certainly increases mortality, and even if it does not diminish the birth-rate, it aids in the production of puny, unhealthy and degenerate offspring.

There is no doubt whatever, I need hardly say, that alcoholism does not account for the entire want of increase of the population of France, for the methods adopted by the French women are well known.

The Longevity of the Poor.—In England and Wales there are six hundred and fifty alms-houses, humorously called "work-houses," where the inmates do very little work, or none at all. An inquiry has lately been made at a hundred and thirty-nine of them to ascertain the number of inhabitants of these State-supported homes who have lived in the reigns of five monarchs—that is, who were born prior to the death of George III. in 1820. The answers are astonishing. In the alms-houses referred to there are no less than 2784 such inmates, giving an average of twenty per alms-house. The Camberwell institution heads the list with 133 five-reign inmates out of a total of 916. Bethual Green comes next with 109 out of 1051, and Hackney third, with 101 out of 1407. Strange to relate, these are all situated in densely populated parts of London, where the air must be far from pure, and where the drinking water is by no means clean. The old people, however—men as well as women—drink tea as often as they can get it, and they seldom touch water. Many of them dislike washing. The Liverpool institution contains the largest number of paupers in the country—3624, but of these only eighty-five have lived in the five reigns. The Cardigan (Wales) work-house contains the smallest number of residents—seventeen, of whom five have lived in five reigns! As far as Great Britain is concerned, it would be easy to prove that pensioners and paupers live long lives. In the United States, also, it is apparent that longevity is not with the rich, as a class. Indulgence in excessive quantities of albuminous food, and in alcoholic drinks, aided by late hours and lack of sufficient outdoor exercise, are inimical to longevity. There is plenty of evidence upon this subject at our disposal. For example, the *National Provisioner*, a New York commercial journal, has recently made an investigation with the object of ascertaining the difference between the death-rate in the twelfth ward, in which the plutocrats live, and the thirteenth, where the so-called "lower" classes exist. The former has sixty-one inhabitants to the acre, the latter 539. The figures show that, whether one takes the deaths of children under five or of the general population at all ages, the comparison between the two wards is unfavorable to the

twelfth ward in Harlem, in which very few families who can be correctly described as "poor" reside. The writer in the *Provisoner* concludes with these words: "The poorer classes, eating plainer and more nutritious foods, seem to prosper constitutionally better than the eaters of rich foods."

The Bacteria We Eat.—According to a Russian *savant*, M. Lakherbekoff, who carried out an elaborate inquiry into the bacterial quality of the milk supplied to St. Petersburg, the condition of affairs in that city is appalling. Milk described as the purest obtainable, was found to contain a minimum of over 10,000,000 and a maximum of over 83,000,000 bacteria in from twenty to twenty-five drops; while in other samples a minimum of 20,000,000 and a maximum of 114,000,000 were found. Such pollution as this is unnecessary, for milk under normal, healthy conditions contains very few bacteria as it issues from the cow. Indeed, some authorities consider that it is absolutely devoid of microbic life. If due precautions are taken in keeping the cows and their stable clean, if the milker is made to keep himself and his clothes in a thoroughly cleanly condition, milk can be placed upon the table which is practically free from all micro-organisms. Of course, the milk-cans require proper attention, and the cows ought to be under the supervision of a veterinary surgeon.

Butter is salted for two reasons: The comparatively unimportant one is that many persons like their butter (and almost all other food) to taste of sodic chloride. The important reason is that the quantity of micro-organisms contained in ordinary butter is so great that salt is necessary to suppress their activities. In England, however, there is little demand for butter which tastes to any extent of salt, and, as a consequence, the slightly salted and fresh article (of which a lump sufficient to fill a thimble contains only 20,000,000 bacteria) is in demand.

An Anæsthetic for an Elephant.—An elephant in the zoological gardens at Hanover, Germany, was recently found to be suffering from a growth upon the lower part of one of its hind feet, and it was decided to remove this malformation. In order to make the animal insensible a dose of six hundred grains of morphia in six bottles of rum was administered. About an hour after the elephant had consumed this combination narcosis was complete, and the operation was performed without any trouble.

A Rat-Eating Lunatic.—The following story has appeared in the Paris (France) daily newspapers: One of the great attractions at street fairs has been the wonderful rat-eating man. He was described as a ferocious savage, and looked it, having a complexion the exact hue of soot, while he went through an alarming performance of hideous contortions and grimaces, accompanied by jabbering and shrill shrieks in front of the

booth, into which he retired at intervals to discuss a meal of rats. It was announced by the showman that the animals before being eaten were not cooked in any way. The savage was said to swallow them alive. Attracted by the evident popularity of the spectacle among frequenters of fairs, the police investigated the matter, after the detectives attending the performance first as spectators: This convinced them that the showman did not delude the public. The savage undoubtedly did swallow live rats. Moreover, he accomplished another feat by drinking a glass of kerosene to wash down each animal. Further inquiry by the police revealed one of the most extraordinary cases on record of criminal abuse of human infirmity. It was found that the so-called savage was, in reality, a lunatic who had escaped from an asylum. The state of the man's mind explained his behavior, but no explanation is given of how his digestive system stood this diet of live rats and kerosene. The poor fellow has been rescued from his employers, who were making a fortune out of the gruesome and melancholy exhibition of his infirmity; and these human monsters, who were encouraging a lunatic's perversions in order to fill their own pockets, have been arrested. Can such a story be true? Let us hope that it is merely a French form of "yellow journalism."

Food Adulteration—Artificial Cinnamon and "Finest Olive Oil."—A native of Ceylon, named Appo, has discovered a method of making artificial cinnamon. The adulterant which he uses for cinnamon is guava, or jungle bark, which costs about twelve cents per pound at Colombo. This bark is carefully peeled, prepared and dried like cinnamon, and resembles it very closely in appearance. The sweet odor and the still sweeter taste peculiar to cinnamon are obtained by soaking the bark in water containing a small quantity of cinnamon oil, and afterwards, when dry, by touching the end of each bundle of the "sham" cinnamon sticks with a cloth saturated with the same oil.

As the discovery of this fraud is new, no suggestions for driving Mr. Appo out of business have yet been made. But it would be interesting to know if there exists any kind of food, from coffee to carrots, which is not adulterated. It is true that many so-called "substitutes" are harmless; but if a buyer pays for a certain article, he ought to receive that article and nothing else.

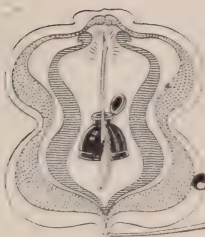
Cotton-seed oil is as good an article of diet, when properly purified, as olive oil; and the difference in taste between the two must be very slight, if any exists. What is usually sold as "pure olive oil" comes from France, and is quite expensive. Italy has placed so high a tariff upon the importation of cotton-seed oil that it is virtually excluded. France, upon the other hand, last year imported from the United States as much as 10,900,000 gallons out of a total export to all countries of 44,000,000. Germany, the next largest customer, only took 3,800,000 gallons. If

the French do not purify the cotton-seed oil and then export it as "the product of the finest olives," what becomes of the large quantity imported?


Vaccination and the Grip.—Dr. F. C. Gram, the able registrar of the Health Department of this city (Buffalo, New York) reports that there appears to be a connection between vaccination and the disappearance of grip. The health authorities of Buffalo have recently concluded a general vaccination, the work being done at a time when the city was suffering from an epidemic of grip of a severe type. The latter disorder began to disappear as soon as the results of vaccination manifested themselves. Dr. Gram experimented upon himself and upon others in whom grip had been diagnosed, and in every case the disease was aborted, leaving the patient without any of those annoying sequels which are so common and which seem to trouble the sufferer for months after the disease itself has passed away. (The above facts are taken from the *New York Times*, but Dr. Gram has authorized me to say that they are accurate.) If this doctrine is correct—and it would be difficult to find a more cautious observer than the registrar of the Buffalo Health Department—vaccination may, in time, become popular with many of the people who at present so strongly object to it. A great part of the popular opposition to compulsory vaccination is based upon a misconception. I have talked to seven persons in the past six months who supposed that the process consisted of the inoculation of *small-pox*. It is true that this method was given a trial in England and was prohibited by statute as long ago as 1840.

Death of William R. Warner, Sr.—Mr. William R. Warner, Sr., of the well-known firm of Wm. R. Warner & Co., Philadelphia, died Wednesday morning, April 3d. For fifty years Mr. Warner was a prominent figure in business life, and during the greater part of that period was closely identified with the medical profession. Hundreds of physicians throughout America will regard his death as a personal loss. The business so honorably and successfully conducted by Mr. Warner and his associates will be continued under the management of Mr. William Warner, Jr.

She Liked the Hospital.—Not long ago at a provincial hospital an old woman, who was being discharged completely cured, was having a last interview with the house physician. "Well," he said, "you have to speak well of the hospital now, won't you?" And the old woman replied "Ay, that I will, doctor. But, sure, I never spoke ill of it. My 'usbanc died here."—*Current Literature*.



Personal Comment



The World's Fair Commissioners appointed by President McKinley have assembled and organized. The Louisiana Purchase Exposition Company has been duly incorporated, and will have over \$15,000,000 to expend for a great World's Fair in St. Louis in 1903. It will commemorate one of the greatest events in the history of America—the acquisition from France of the Louisiana Purchase.

The INTERSTATE MEDICAL JOURNAL is published from the metropolis of the Louisiana Purchase, and thousands of its readers reside in the states organized from that territory. We feel assured that this exposition, unlike others held in the past, will commemorate the great work done in medicine and surgery, and we invite our readers to suggest suitable forms of recognition.

From time to time we will devote space to the consideration of such features of the Louisiana Purchase Exposition as seem relative to interests of our readers.

The Louisiana Purchase.—A nation which is in a healthy condition tends to increase in population and in wealth, and this surplus wealth and population creates a demand for new territory to settle and exploit. Expansion is a natural, and, ultimately, perhaps, a necessary incident of healthy national development. So general is this truth that it may be put down as a law of political science, that all nations tend to extend their boundaries to the limit of the territorial unity in which they find themselves established. From one point of view the whole history of the United States is merely a commentary on this thesis. At the beginning of the seventeenth century three European countries—omitting the Dutch, whose possessions were soon absorbed by the English—had staked out their claims in the new continent; Spain in Florida and the southwest; France along the St. Lawrence and the lakes; England on the eastern coast from Maine to Georgia. Conflict was inevitable; the problem was which would win. Territorially, the history of the United States is the history of the success of the English—of their steady march westward. In this westward movement they came in contact first with the French in the valley of the upper Ohio; the French and Indian war. 1756–1763 marks the expulsion of this nation from the American continent. Incidentally, before the westward movement was resumed, the connection between the

colonies and the mother country was severed, and the American state was established; then the pressure westward was resumed with redoubled force.

The next problem was the expulsion of the Spanish from the south and southwest. Step by step this was accomplished—first, Louisiana, then Florida, Texas, the north Mexican states and California, were acquired. That Louisiana was actually acquired from France, and Texas, New Mexico, and California from Mexico, is a fact of merely nominal importance; this was the region which Spain had originally staked out as her own, and the real conflict was one of American *versus* Spanish control.

The term Louisiana was for many years previous to, and after the acquisition of the territory by the United States, a vague one. During the last quarter of the seventeenth century the French explorer, La Salle, reached the mouth of the Mississippi river, and at the very close of the century, 1699, the French colony of Louisiana was planted by the Sieur d'Iberville, near the present site of New Orleans. The aim of the French was to connect the new colony of Louisiana with the old one of Canada, by a chain of forts which would guard every gateway from the west to the east. As their schemes were grand, so their descriptions were vague. The only official description which the French ever gave of Louisiana is contained in the charter grant of the colony to Crozat, in the year 1712. It was then said to be bounded "by New Mexico and the lands of the English Carolina from the edge of the sea, as far as the Illinois, together with the river St. Philip, heretofore called the Missourys, with all the countries, territories, lakes, and the rivers which fall directly or indirectly into that part of the river St. Lewis" (Mississippi).

Such was Louisiana when France possessed it. The treaty of Paris in 1763 marked the end of French empire in America. All territory east of the Mississippi, save New Orleans, was ceded by France to England, and at the same time England acquired Florida from Spain. A few months earlier, however, France had ceded all her territory west of the Mississippi, including New Orleans, to Spain. The boundary between the Spanish and English possessions was now the Mississippi and the Iberville rivers, and such it remained until 1783, when Spain again acquired Florida from England. During all this time the term "Louisiana" was applied to the territory west of the Mississippi and the Iberville rivers, which Spain had acquired from France. Such was Louisiana in the hands of Spain.

From 1783 to 1800, settlement of the southwest was rapid. By the close of the century the American frontier had been carried to the very edge of the Spanish possessions. But the Mississippi was no barrier to the enterprising Americans, and they quickly passed over into Florida and Louisiana. It may well be imagined that the conservative Catholic Spaniard had no love for the lawless frontiersman, yet they knew themselves to be no match for him in colonizing and holding the vast region of Louisiana. Conflicts like the capture of Philip Nolan in 1800 might, the

feared, bring on a war with the young republic, which would end with the conquest, not only of Louisiana, but also of the much more highly valued province of Mexico. To protect herself against the aggressions of the United States, Spain was therefore willing to cede the almost worthless (to her) province of Louisiana to some other country, which would form a buffer between herself and her enemy. At the same time Napoleon was dreaming of a great colonial empire. He would regain the lost possessions of France in America. Spanish fear and French ambition resulted, therefore, in the treaty of San Ildefonso, in the year 1800, by which Spain ceded to France the province of Louisiana, "with the same extent that it now has in the hands of Spain and that it had when France possessed it." The next year Napoleon occupied the island of Haiti, preparatory to the occupation of Louisiana, and one year later the Spanish Intendant at New Orleans closed the Mississippi to American vessels. The free navigation of the Mississippi was a matter of vital importance, because that river furnished the commercial outlet for the whole southwest. The act of the Spanish Intendant was looked upon as representative of the future policy of the French. The danger was imminent, and the whole southwest clamored for immediate interference by the government.

President Jefferson professed aversion to war and friendship for the French. Yet he was forced to take action because, aside from the fact that his party demanded it, he clearly perceived the necessity of controlling the Mississippi river. "The day that France takes possession of the Mississippi," he wrote in pathetic surrender of all his pet theories, "we must marry ourselves to the British fleet and nation." But war should serve only when negotiations failed. Livingston was instructed to secure, if possible, a cessation of New Orleans, and so much of west Florida as might be necessary to give the United States control of the Mississippi. Monroe was appointed minister extraordinary to aid in the negotiations, and two millions of dollars were appropriated for the purchase.

For more than a month Livingston wearied the First Consul with argument, remonstrance, threats, to convince him how much to his advantage the cession of New Orleans would be. It was a vain effort; his only satisfaction was the smooth phrases of Talleyrand. New Orleans would be retained, since it alone made Louisiana valuable. But with characteristic suddenness Napoleon changed his plans absolutely. Reverses in Haiti had modified his ardor for a colonial empire, which was impossible in any case without the support of a powerful navy. England, jealous of the transference of Louisiana to France, would, he perceived, reopen the war by possessing herself of that province, preparations for which were, perhaps, even at that moment being made. He would checkmate her by surrendering the whole of Louisiana to the United States. It would thus be forever lost to England. On April 11, 1803, he broached the subject to his ministers, Talleyrand, Barbé-Marbois and Decrès. "I know the full value of Louisiana, and I have been desirous of repairing

the fault of the French negotiator who abandoned it in 1763. A few lines of a treaty have restored it to me, and I have scarcely recovered it when I must expect to lose it. But if it escapes from me, it shall one day cost dearer to those who oblige me to strip myself of it, than to those to whom I wish to deliver it. The English have successively taken from France: Canada, Cape Breton, Newfoundland, Nova Scotia, and the richest portion of Asia. They are engaged in exciting troubles in St. Domingo. They shall not have the Mississippi, which they covet. Louisiana is nothing in comparison with their conquests in all parts of the globe, and yet the jealousy they feel at the restoration of this colony to the sovereignty of France, acquaints me with their wish to take possession of it, and it is thus they will begin the war. They have twenty ships of war in the Gulf of Mexico; they sail over those seas as sovereigns, whilst our affairs at St. Domingo have been growing worse every day since the death of Leclerc. The conquest of Louisiana would be easy, if they only took the trouble to make a descent there. I have not a moment to lose in putting it out of their reach. I know not whether they are not already there. It is their usual course, and if I had been in their place I would not have waited. I wish, if there is still time, to take away from them any idea that they may have of ever possessing that colony. I think of ceding it to the United States. I can scarcely say that I cede it to them, for it is not yet in our possession. If, however, I leave the least time to our enemies, I shall transmit only an empty title to those republicans whose friendship I seek. They only ask of me one town in Louisiana; but I already consider the colony as lost, and it appears to me that, in the hands of this growing power, it will be more useful to the policy and even to the commerce of France, than if I should attempt to keep it." Barbé-Marbois confirmed the First Consul in his resolution. Decrès opposed the plan, dilating on the importance of colonies to the welfare of France; but Napoleon cut short all discussion by the following outbreak: "Irresolution and deliberation are no longer in season. I renounce Louisiana. It is not only New Orleans that I will cede, it is the whole colony without any reservation. I know the price of what I shall abandon, and have sufficiently proved the importance that I attach to this province, since my first diplomatic act with Spain had for its object its recovery. I renounce it with the greatest regret. To attempt obstinately to retain it would be folly. I direct you to negotiate this affair with the envoys of the United States. Do not even await the arrival of Mr. Monroe; have an interview this very day with Mr. Livingston. But I require a great deal of money for this war, and I would not like to commence it with new contributions. . . . I will be moderate, in consideration of the necessity in which I am of making a sale. But keep this to yourself. I want fifty millions, and for less than that sum I will not treat; I would rather make a desperate attempt to keep these fine countries. To-morrow you shall have full power."

On the same day, therefore, Livingston was astonished by the request

to set a price on the whole of Louisiana. Without instructions he offered twenty millions of francs; some weeks of bargaining fixed the price at eighty millions.

Fortunately or unfortunately, the treaty contained no accurate description of the bounds of the territory acquired. In the words of the treaty of San Ildefonso, it was stated that Louisiana was ceded to the United States, "with the same extent that it now has in the hands of Spain and that it had when France possessed it." This left both the eastern and the western boundaries still indefinite. With the acquisition of Florida in 1819, the question of the eastern boundary was no longer of any practical importance. The treaty by which Florida was ceded to the United States settled the western boundary as follows: the Sabine river from its mouth to the thirty-second degree of latitude; thence due north to the Red river, along the Red river to the one hundredth degree of longitude west from London; thence due north to the Arkansas river, along the Arkansas river to its source; thence due north to the forty-second degree of latitude; thence west to the Pacific ocean.

CARL BECKER.

Pennsylvania State College.

His Diagnosis.—The boy's name is Rufus, and he was busily engaged in polishing the doctor's shoes while he was being shaved. As was his custom, the doctor said: "How are you feeling, Rufus?" "I ain't much. Kindly poohly, thank you, doctah," answered the boy. "What's the matter?" "Paralysis." "What?" "Paralysis." Had the doctor not been so well acquainted with the negro race, he might have allowed himself to show astonishment. As it was, he determined to see what would result from further inquiries. "Where's your paralysis?" he asked kindly. Rufus was drawing a rag swiftly across the left shoe. "In the right hip, doctah," he answered. "It's probably rheumatism," suggested the physician. "No, indeed. It's paralysis. I reckon I knows rheumatism and I knows paralysis. This is suttently paralysis." The doctor drew a good-sized pin from the lapel of his coat. "Well, Rufus," he said, seriously, "there is only one way to tell. Come here. I'm going to jab this pin in your hip. If it hurts, then you have rheumatism. If you don't feel it, then you are right and you have paralysis." The boy did not rise but drew the rag thoughtfully across the shoe. Finally he said: "Doctah, I reckon you mus' know more about them things than I do. I know it ain't nothin' but jes' common ole misery."—*Exchange*.

MEDICAL TREATMENT.

The Diazo-Reaction in Small-Pox.—Sergent states that the diazo-reaction test in small-pox gave reaction in nine out of eleven cases.

During the period of suppuration it was present in thirty-one out of thirty-five. During desiccation it was found but nine times in fifty-one.

This reaction is, therefore, almost constant in the course of variola in full evolution, and in the author's opinion, this test should be of some value in distinguishing between variola and chicken-pox. In the latter disease, the diazo-reaction is absent, as a rule—just the converse of what obtains in small-pox.

Prevention of Mosquito Bites.—According to an exchange, there is nothing that equals kerosene as a topical application to prevent mosquitoes from biting. By suspending a small flannel rag wet with kerosene at the open door or window it will keep them out of the room. Rub some over the hands and face and a little in the hair, and it is a sure defense against a roomful of mosquitoes.

Physician Not Obligated to Answer Call.—The supreme court of Indiana has recently decided that a licensed physician is not legally obliged to attend a patient when called, although he has been the family physician of the patient in times past. Dr. Weddingfield refused to attend a patient, although he had been called three times. The patient died, and it was charged that her death was caused by the doctor's refusal to respond to the call. He was sued for \$10,000 damages.

Solid Hydrogen.—We learn from a contemporary that in Prof. Dewar's paper on the solidification of hydrogen, read before the British association, that solid hydrogen presents the appearance of frozen water, and not, as had been anticipated by many, of frozen mercury; hence, it is now definitely decided that it is not metallic. The temperature of the solid is 16° absolute at thirty-five millimetres pressure, and it melts at 16° or 17° absolute, the practical limit of the temperature obtainable by its evaporation being 14° or 15° absolute. Thus the last of the old gas has been solidified. It was further mentioned, in connection with these statements, that Prof. Dewar had succeeded in liquefying helium.

A Case of Pneumopericardium.—R. Sievers narrates a case of pneumopericardium where the fluid and air gained entrance into the pericardium through the involvement of the pleural cavity with pus and air. The cause of the condition was a gangrene of the left lung.—*Berliner klin. Wochenschrift*, No. 12.

Experimental Work on Cirrhosis of the Liver.—Marchwald in the *Muench. med. Wochenschrift*, No. 13, narrates his experimental work on frogs and mice, in his endeavor to find the etiology of liver cirrhosis. Frogs and mice were daily injected with small doses of antipyrin. Cirrhosis of the livers of these animals took place as a reaction on the part of the organism, the liver tissue being destroyed. Injection of larger doses of the drug led to complete destruction of the liver tissue.

Hydatid Cyst of the Liver in a Child.—M. Broca speaks of a case of hydatid cyst of the liver in a child (*La Semaine Med.*, Nos. 12 and 13) and the method of operation for it, following the operation devised by Delbet. The operation is made by resection of the sac and complete suture of the cyst wall, without drainage.

Naphthalan in Eczema.—The treatment of eczema is various. Wherever we find a disease with many remedies recommended for its cure, it is a natural supposition that not one of the many remedies has much efficacy. This is true of eczema. The results of treatment with naphthalan, especially in the treatment of eczema of the outer ear or auricle, are very flattering, and warrant us in indorsing it for others' trial. We do not do so with diffidence, because we have seen the effects of treatment with it and can conscientiously recommend it. It is a fact that this kind of eczema is often most resistant to all treatment. It is also a fact that naphthalan has worked well here in this class of cases, and so deserves more trials.

Conjunctivitis Typical to La Grippe.—Like all infectious diseases, la grippe brings with it an affection of the eye—or, to be exact, all parts of the eye, like all parts of the body, may be attacked by it. One affection, however, is specific in this disease—the “grippe conjunctivitis.” The patient comes complaining of heaviness of the lids; a sticky, yellow secretion in the morning, and the conjunctiva of the ball full of injected small vessels, and upon drawing down the lid the palpebral conjunctiva is full of granulations, in appearance resembling trachoma, but with the conjunctival fold perfectly free of these excrescences; and this fact, linked with the previous history of “the severe cold” and sudden appearance of the affliction, will enable us to make the diagnosis. The usual sandy feeling of the eye accompanies this trouble.

Application of a mixture of four ounces of water, three drachms deodorized tincture of opium, and one drachm of boric acid should be ordered in the following manner: The solution is to be kept cold or very cool; a linen or cotton pad (very thin) should be dipped in the solution, squeezed out and applied to the closed eye for two minutes, moistened again, and this proceeding continued for ten to fifteen minutes, four times daily. Avoidance of reading and strong light recommended. Before retiring apply to the lids a salve of—

R Hydrarg. oxid. flav..... gr. iss
 Vaselini,
 Lanolini..... aa ʒ j
 M. et ft. ungt.

Not more of it to be used than necessary to wet the finger and spread over the lids. A few days of this treatment will give ready relief, unless other complications manifest themselves.

A grippe keratitis, resembling the malarial type very closely, is frequently found. The endless variety of the affections of the deeper structures of the eye, sometimes following grippe, would exceed the frame of these remarks, and are not in the scope of the general practitioner.

The Broom as a Spreader of Disease.—Dust is now generally recognized as one of the most efficient vehicles of germs of disease. Dr. Max Girsdansky finds the broom to be one of the most active agents in sending them into the air, where they are diffused by whatever breezes may be blowing there. The housewife digs the dust out of her carpets and stirs it out of the quiet corners where it has accumulated, wearing an old dress and covering her head while she leaves her lungs exposed, then shakes her rugs in the yard; and the street sweeper transfers the dust he has charge of from the pavement to the atmosphere, where we can breathe our fill of consumption from day to day. Therefore, the author holds, the broom, "far from serving any hygienic purpose, is the cause of the maintenance of organic dust in the atmosphere of the large cities of the world, and as such is the most important cause of the existence and spread of tuberculosis." Further, the carpet is pronounced "an unhygienic article, serving as a fine breeding ground for vegetable parasites, necessitating the use of the broom and the duster, and thereby becoming a reason for the existence of organic dust." As the only proper and safe way of procuring the cleanliness of the floors and streets of our large cities, Dr. Girsdansky advises the free use of water in the shape of showers, or with sprinkling wagons, hose, mops, etc., and that all floors and floor coverings of the house and the street be so constructed as to facilitate the free use of water in these ways.—*Popular Science Monthly*.

The Burlington Route to St. Paul.—The Burlington Route has two main lines from St. Louis to St. Paul, one on each side of the Mississippi river. Physicians contemplating attending the Military Surgeons Association, May 29–31, the American Academy of Medicine, June 1–3, the American Medical Association, June 4–7, will find the best service by the Twin City Express, leaving St. Louis at 2:05 P. M., and reaching St. Paul the following morning at 8:40. This train carries buffet sleepers and coaches. The East Side line leaves St. Louis at 1:21 A. M., arriving at St. Paul the following morning. A special rate of one fare plus \$2.00 has been made for the round trip (from St. Louis, \$18.00).

SURGICAL SUGGESTIONS.

Thyroid Surgery.—At the recent German Surgical Congress, Kocher read the leading article on surgery of the thyroid. His conclusions, after operating his second thousand cases, were the thyroid treatment is useless and often harmful. The amount of iodine in gland is diminished in these cases and can be best increased by feeding the cases phosphate of soda, as demonstrated by his son's experiments. It was suggested that lack of albuminized food in the subjects of Switzerland might account for this, and that absence of goitre in the peoples who live on highly albuminized food—the English, for example—might indicate the reverse condition of nutrition, where sufficient phosphorus is obtained to maintain the normal condition. His mortality is about two per cent. The article referred especially to thoracic goitre. The tumor sometimes extends as low as the second rib. Percussion is useful, and the X-ray has been used by him to demonstrate the condition. It is very necessary to first ligate the isthmus, which is more perfectly done after crushing with a forcep. Having everything tied and divided above, avoids serious embarrassment by hemorrhage later, when tumor is extracted. A special spatula spoon is used for delivering the tumor. Cocaine, one per cent., is used for anesthesia without exception.

Roentgen Rays in Obstetrical Work.—The X-rays have been utilized in nearly every branch of surgery and also in some parts of medicine, and now the latest advance is the use of these rays in obstetrics. Wromser, of Basel, has recommended that the X-rays be used to ascertain the condition of the pelves of pregnant women. In other words, he hopes to be able to recognize pathologic conditions in the bony pelves of pregnant women by these means. He gives some reports on this subject where he recognized pathologic bony changes in four cases; but, so far as we can observe, his deductions are practically *nil*, so far as having any bearing on the cases. We are much inclined to believe that the X-rays in obstetrics are only a refinement and will never have any practical usage in this department of medicine. That we can recognize bony imperfections by other means sufficiently to make accurate diagnoses is well known, and up to the present writing we fail to see just how the Roentgen rays will help us out in these "straits." So we presume that obstetricians will continue to live and die without utilizing the X-rays.

MEDICAL SOCIETIES.

Meeting of the American Medical Editors' Association.—The annual business meeting of the American Medical Editors' Association will convene in the library rooms of the Ramsey County Medical Society, Lowry Arcade building, St. Paul, at 2.30 P. M., Monday, June 3d. The Lowry Arcade building is situated in St. Peter street, between Fourth and Fifth.

This association, as implied in the name, consists of medical editors of the United States. Meetings are held annually, coincident with the American Medical Association. The aims of the association are the advancement of medical journalism, the foundation of an ethical press in medicine, and the improvement of the medical profession in general. The membership includes the leading medical writers and editors of the country.

The meeting this year will be a most successful one, both from the point of presentation of valuable papers and the energetic work of the members of the association which will be made manifest at the meeting. The preliminary program is calculated to interest and benefit every medical editor. A partial list of papers includes:

President's Address, Dr. Alex. J. Stone, of St. Paul.

Relative Value of Medical Advertising, by Dr. John Punton, of Kansas City, Missouri.

Paper, subject unannounced, by Dr. John V. Shoemaker, of Philadelphia.

Improvements in Medical Education, by Dudley S. Reynolds, of Louisville.

Some Thoughts on the Ethics of Medical Journalism, by Burnside Foster, of St. Paul.

Editorial Corps and Medical Journalism, by Dr. George F. Butler, of Alma, Michigan.

A Journalistic Review of the Year, by Dr. Chas. Wood Fassett, of St. Joseph, Missouri.

Relation of the Medical Editor to Original Articles, by Harold Moyer, of Chicago; and

Paper, subject unannounced, by Dr. George H. Simmons, of Chicago.

The annual dinner of the association will be held at 9 P. M., June 3d, reservation of plates should be made at once. Membership applications and titles of additional papers can be sent to Alexander J. Stone, Lowry Arcade, St. Paul, president, or O. F. Ball, Century building, St. Louis, secretary.



The History of Medicine in the United States. By FRANCIS RANDOLPH PACKARD, M. D. Illustrated. Octavo, pages 542. J. B. Lippincott Company, Philadelphia and London. 1901.

Packard's history describes the rise of American medicine from the period of the colonization along the Atlantic coast to the time of the discovery of anæsthesia. The many facts presented in this book have been obtained as a result of long and laborious research, not only in works which are strictly medical, but along the lines of contemporary literature; and they are presented in a clear and instructive manner. The field has been carefully scanned; and the physician who is interested in early American medicine will profit by Dr. Packard's work. Among the most interesting chapters are those on early medical schools, the earliest hospitals, medical legislation in the colonies, and the discovery of anæsthesia.

International Clinics. Volume I., Eleventh Series, 1901. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Surgery, etc. By Leading Members of the Medical Profession throughout the World. Philadelphia: J. B. Lippincott. 1901.

The first volume of the eleventh series of the well-known work "International Clinics" is truly an exceptionally good number. The contents include excellent *resumes* of the year's work in medicine and surgery. The original articles on timely subjects are each all well worth the attention of the busiest man in practice. The articles which deserve particular mention are those on the infectious diseases. Another excellent article of great interest to a certain class is that by Walmsey on photomicrography. The entire subject of photomicrography is gone over in a manner which will enable the novice to take up the work and do well at it simply by following the directions and suggestions laid down in the article.

We take pleasure in recommending the book to the practitioner and student of medicine.

An American Text-Book of Diseases of Children. By American Teachers. Edited by LOUIS STARR, M. D., Assisted by THOMPSON S. WESTCOTT, M. D. Second edition, revised. Philadelphia: W. B. Saunders. 1898.

This excellent work is now before us in its second edition. While no very decidedly new features have been added to it, it shows the good ef-

fects of revision. As to its merits as a text-book, the names of the galaxy of talented men who have contributed to its life would insure that without the reviewer's modest words of criticism. We can only say that the book reflects well the stamp of its brilliant authorship. Not a page contains anything which is not germane to the subject, and every word is of value. It is, indeed, difficult to find a more valuable book in medical literature in English that compares with the one in hand. The important subject of infant-feeding is well discussed by the masters who know whereof they speak. The illustrations help out the text. It is a fine work.

The Care of the Baby. A Manual for Mothers and Nurses. By J. CROZIER GRIFFITH, M. D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania. Second Edition, Revised. Philadelphia: W. B. Saunders. 1899.

Books of this kind have their place in literature. There is growing up at this latter day a class of people who seem anxious to instruct themselves on matters pertaining to hygiene and disease in general. This is a book that is written for the mother who wishes to know the *rationale* of caring for her child. It is excellently written, and will always reflect well on its author. We bespeak a pronounced success for it from the class referred to. Nurses will do well to buy the book and read it. They cannot fail to be instructed by following its teachings.

Annual Meetings.—Annual meeting military surgeons of the United States, May 29–31, 1901; annual meeting American Academy of Medicine, June 1–3, 1901; annual meeting American Medical Association, June 4–7, 1901—at St. Paul, Minnesota.

RATE.—One first-class normal tariff (not temporarily reduced) fare, plus \$2.00, for the round trip.

DATES OF SALE.—May 27, 28, 30, 31, June 2 and 3.

LIMIT.—Tickets to be limited to continuous passage in each direction; going trip to commence date of sale, and return trip date of execution; good returning from St. Paul not earlier than May 29th nor later than June 15, 1901; *except*, that if ticket is deposited with the joint agent not earlier than May 29th nor later than June 15th, an extension of time will be granted leaving St. Paul up to and including July 15, 1901. Execution fee of fifty cents will be charged regardless of whether extension of limit is secured or not. When extension of limit is secured, the execution fee of fifty cents must be paid at the time ticket is deposited.

The most Perfect Form of Dosimetry is afforded by

PARVULES

THE term Parvule, from *Parvum*, (small) is applied to a class of remedies (Warner & Co.'s) in the form of minute pills, containing minimum doses for frequent repetition in cases of children and adults. It is claimed by some practitioners that small doses, given at short intervals, exert a more salutary effect. Sydney Ringer, M. D., in his recent works on Therapeutics, sustains this theory in great variety of cases. 20 cents per 100.

PARVULES OF CALOMEL, 1-20.

MED. PROP.—ALTERATIVE, PURGATIVE.

Dose.—1 to 2 every hour. Two Parvules of Calomel, taken every hour until five or six doses are administered (which will comprise but half a grain), produce an activity of the liver which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

PARVULES OF CALOMEL AND IPECAC.

R Calomel, 1-10 gr.
Ipecac, 1-10 gr.

MED. PROP.—ALTERATIVE, PURGATIVE.

Dose.—1 to 2 every hour. Two Parvules of Calomel and Ipecac, taken every hour until five or six doses are administered (which will comprise but a grain of Calomel), produce an activity of the liver, which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

PARVULES OF ALOIN, 1-10.

MED. PROP.—A MOST DESIRABLE CATHARTIC.

The most useful application of this Parvule is in periodic irregularities—Dysmenorrhœa and Amenorrhœa. They should be given in doses of one or two every evening at and about the expected time.

Dose.—4 to 6 at once. This number of Parvules, taken at any time, will be found to exert an easy, prompt, and ample Cathartic effect, unattended with nausea, and in all respects furnishing the most aperient and cathartic preparation in use. For habitual constipation, they replace when taken in single Parvules the various medicated waters, avoiding the quantity required by the latter as a dose, which fills the stomach and deranges the digestive organs.

PARVULES OF PODOPHYLLIN, 1-40.

MED. PROP.—CATHARTIC, CHOLAGOGUE.

Two Parvules of Podophyllin, administered three times a day, will re-establish and regulate the peristaltic action and relieve habitual constipation, add tone to the liver, and invigorate the digestive functions.

PARVULES OF NUX VOMICA, 1-50.

(WARNER & CO.)

Nux Vomica, according to Dr. Ringer, is possessed of real curative powers for sick headache, accompanied with acute gastric catarrh, whether due to error in diet, constipation, or to no apparent cause. He regards it, administered in small and frequently repeated doses, as useful in many disturbances of the gastric functions.

SUPERIOR TO PEPSIN OF THE HOG
INGLUVIN

A Powder—Prescribed in the same manner, doses and combinations as pepsin.

A SPECIFIC FOR VOMITING IN GESTATION IN DOSES OF 10 to 20 Grains.

WILLIAM R. WARNER & CO.

PHILADELPHIA
NEW YORK
CHICAGO

LARGEST PILL FACTORY IN THE WORLD.

For sale by all druggists or sent by mail on receipt of price. Physicians' private formulæ made up in lots of 3,000 and over. Pills, granules or compressed form. Write for quotations.

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

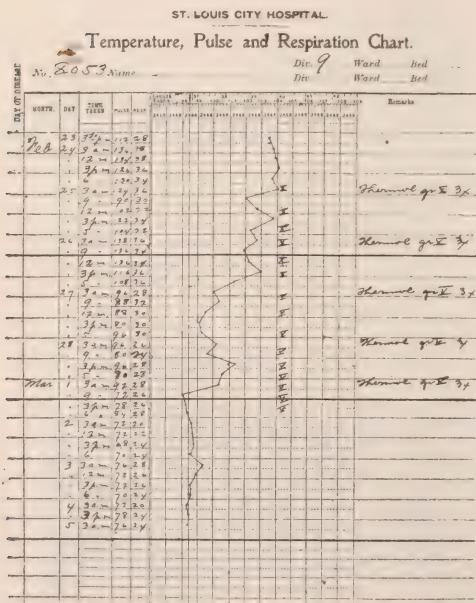
THERAPEUTIC NOTES.

Thermol in the Treatment of Pneumonia.—(From records of St. Louis City Hospital. By James A. Matlack, M. D., of St. Louis, Missouri.) Although the past winter has, on the whole, been a mild one, there has apparently been no decrease in the number of cases of pneumonia. The St. Louis City Hospital receives the worst of these cases, the patient usually entering in a late stage of the disease, having had no treatment, and suffering from neglect. It is upon these severe and neglected cases that the value of therapeutic measures can best be tested; for mild cases, or those seen at the onset, usually respond readily to any form of treatment.

The hospital staff has been diligent in combating the disease, and every known method of treatment has been resorted to. Especially good results have been obtained from the use of thermol, $C_{11}H_{15}NO_3$. The following report of cases treated by thermol will illustrate its action:

CHART I.

CASE 1.—D. E., aged thirty, laborer; admitted February 23, 1901. Habits irregular; drinks to excess. Has had syphilis and gonorrhœa.





HYDROZONE

(30 vol. preserved
H₂O₂ solution.)

IS THE MOST POWERFUL ANTISEPTIC AND PUS DESTROYER.
HARMLESS STIMULANT TO HEALTHY GRANULATIONS.

GLYCOZONE

(C. P. Glycerine
combined with Ozone.)

IS THE MOST POWERFUL HEALING AGENT KNOWN.

Successfully used in **DYSPEPSIA, GASTRITIS, GASTRIC ULCER, HEART-BURN, CONSTIPATION, DIARRHŒA, TYPHOID FEVER, TYPHUS, YELLOW FEVER, CHOLERA INFANTUM, ASIATIC CHOLERA, DYSENTERY, Etc.**

Send for free 300-page book "Rational Treatment of Diseases caused by Germs," containing reprints of 140 scientific articles by leading contributors to medical literature.

Physicians remitting 50 cents will receive one complimentary sample of each, "Hydrozone" and "Glycozone."

Hydrozone is put up only in extra small, small, medium and large size bottles bearing a red label, white letters, gold and blue border with my signature.

Glycozone is put up only in 4-oz., 8-oz. and 16-oz. bottles bearing a yellow label, white and blue border with my signature.

Marchand's Eye Balsam

cures all inflammatory and contagious diseases of the eyes.

DISTRIBUTING AGENTS:

Thomas Christy & Co., 25 Lime St., London, Eng.

Leeming, Miles & Co., 53 St. Sulpice St., Montreal, Can.

Beckett, Zeilin & Co., 220 Sutter St., San Francisco, Cal.

E. H. Buehler, 134 Lake St., Chicago, Ill.

John W. Lehman, 428 Camp St., New Orleans, La.

PREPARED ONLY BY

Charles Marchand

Chemist and Graduate of the "Ecole Centrale des Arts et Manufactures de Paris" (France).

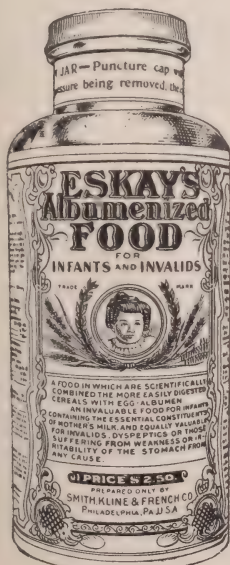
57-59 Prince St., New York.



SOLD BY LEADING DRUGGISTS.

AVOID IMITATIONS:

MENTION THIS PUBLICATION.



ESKAY'S FOOD

In the

New Glass Package

just adopted and shown herewith, **has the air entirely exhausted** and the closure is held firmly in place by **vacuum pressure**, thus hermetically sealing it.

This protects the Food against any possible deterioration from the action of the air upon the particles of Food; and as the packages are germ-proof and the Food has, before packing, been thoroughly

STERILIZED

the medical profession will appreciate the value of this perfected process for protecting

**The Ideal Food
For Infants and Invalids**

Samples and Clinical Reports Upon Application
SMITH, KLINE & FRENCH CO., Manufacturers
Philadelphia, Pa.

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

apathy; vomiting and diarrhoea. Over left lower lobe there is dullness; increased tactile fremitus, tubular breathing and bronchophony. Different moist rales over balance of chest. Patient was in critical condition upon entrance and remained so for several days. Thermol administered on evening of February 24th. First dose of thermol (gr. x) brought temperature down two degrees, as will be noted on chart, with corresponding improvement in pulse. Patient improved rapidly, and resolution began on the 27th. Temperature became normal on March 1st, and patient had an uninterrupted recovery.

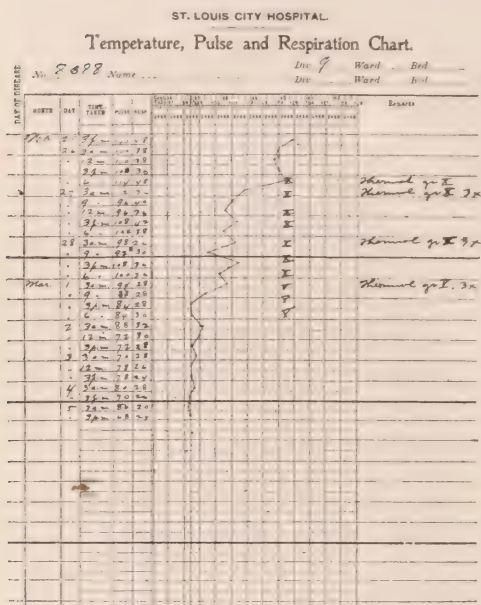


Chart 3.

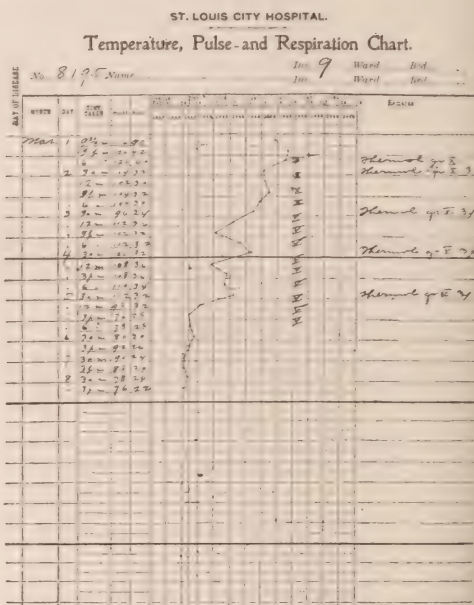


Chart 4.

CHART II.

CASE 2.—S. F., aged twenty-seven, cook; admitted February 24, 1901. Habits, family history and personal history good. Twelve hours before admission into hospital patient had a severe chill, followed by high fever. Has severe pain in right side; cough with rusty-colored expectoration; face flushed and anxious. Over right lower lobe, anteriorly and posteriorly, there is increased vocal fremitus, absent vesicular murmur, relative dullness and crepitant rales. Pulse weak and compressible. Temperature on entrance was 102.50; rose next day to 104.40. Thermol administered in ten-grain doses; temperature readily controlled, with decided improvement in all symptoms. Temperature returned to normal on fourth day of disease, and convalescence was rapid.

CHART III.

CASE 3.—Z. P., aged thirty-six, laborer; admitted February 25, 1901. Habits and personal history good. Mother died of phthisis. Patient became ill four days prior to entrance into hospital. Following exposure,

Nutrient Wine of Beef Peptone.

A liquid food presenting the entire digestible substance of fresh, raw, lean beef in a readily assimilable form.

Nutrient Wine is a palatable and highly nutritious preparation, of especial service in cases where the stomach cannot appropriate solid food.

**Armour & Company,
Chicago.**

he had a chill, followed by fever and sweating; slight cough, with brown-streaked expectoration; pain in left side; insomnia and great prostration. Over middle and lower lobes of left lung, anteriorly and posteriorly, there is absolute dullness, with greatly increased tactile fremitus, tubular breathing and bronchophony. Pleuritic friction sound in left infrascapular region. Mucous rales over upper lobes of both lungs. Heart action weak and irregular. Pulse rapid and compressible. Face cyanotic. Temperature on entrance was 104.8, and remained high until administration of thermol was commenced, when range of temperature immediately became lower; character of pulse improved and cyanosis disappeared. Patient made uninterrupted recovery.

CHART IV.

CASE 4.—F. F., aged thirty-two, laborer; admitted March 1, 1901. Habits and personal history fair. Four days before entrance into hospital patient had chill followed by fever; headache and nausea; pain in right side; cough, with expectoration of tenacious, blood-streaked mucus. Absolute dullness over upper and middle lobes of right lung, with increased tactile fremitus, tubular breathing and bronchophony. Pulse rapid and weak. Face flushed, with tendency to cyanosis. Temperature ranging in neighborhood of 104.0 on entrance. After administration of thermol temperature range became lower, circulation improved and patient became comfortable. Crisis occurred on fifth day after entrance, and patient rapidly regained health.

Pneumonia is essentially a disease which tends to run a varied course. It is but too true that a typical case should follow certain lines, but it is also true that perfect heart action is necessary in all events and at all times. The symptoms that demand treatment in pneumonia are high febrile conditions, delirium, cerebral symptoms and failing cardiac power. With a successful combating of these untoward symptoms it may fairly well be promised that the patient will get well. In some cases we do not need medical treatment at all; in other cases it is absolutely necessary to have remedial agents at work that will take care of the oppressed nervous and cardiac centers and tide the patient over until resolution sets in. It is in the class of cases referred to that the effects of any given agent can best be tested. The cases in hand need but little comment, as inspection of the temperature charts will show conclusively that the therapy adopted was productive of the good results which we wish for in this disease, and that the end in view was well accomplished by the use of thermol. In none of these cases was any remedy except thermol used, and in every case was improvement immediate and recovery rapid. It should be especially noted that there was no tendency to cardiac depression—which is often too true with many of the remedies used in the treatment of this disease—but that, on the contrary, the circulation always became better after the exhibition of the drug. Antipyresis was successfully accomplished and there was no need for calling into use the digitalis group of drugs. It is a fact that thermol is a safe agent to use in the treatment of pneumonia; it is also a fact that it has decided effects for the better on untoward features of the disease. These are two qualities which stamp the worth of any drug: *first*, that it does good, and, *secondly*, that it does no harm. Thermol is

TO REMIND YOU

of Scott's Emulsion of Cod Liver Oil; and to ask you not to omit the name in prescribing it.

It is certain to give you satisfaction. It will never fail you. It is absolutely the same. You can always depend upon it.

The cordials and wines of Cod Liver Oil are simply make-shifts—tonics with practically no nutritive value, and nobody can tell what the so-called non-secret emulsions are; they are simply made to sell.

Scott's Emulsion is the standard the world over and more so to-day than ever. Nothing can take its place.

Send for sample for comparison.

SCOTT & BOWNE,

409 Pearl Street,

New York.

McArthur's Syrup

**Not a
Stimulant,
but a
FOOD**

Hypophosphites

(Lime and Soda) Comp.

A Most Reasonable

Tissue Builder and Reconstructive,

Prepared according to the formula of Dr. Churchill.

**Slow,
but
Sure**

Quick, temporary results not to be expected, but slow and permanent improvement will surely follow a generous treatment with McArthur's Syrup, in which phosphorus, lime and soda are incorporated with pure syrup in their most assimilable form, hypophosphites.

Upon receipt of forty-five cents in stamps we shall be pleased to forward, express prepaid, one regular bottle, one dollar size. *Small sample and literature free.*

The McArthur Hypophosphate Co., Ansonia, Conn.

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

therefore to be strongly recommended in the treatment of croupous pneumonia.

Dioxogen.—For the protection of the medical profession, Oakland hydrogen dioxid will hereafter be known as dioxogen. The change of name has become imperative, both to protect the physician from inferior solutions and to preserve the reputation of the product itself. The therapeutic value of hydrogen dioxid depends solely on the purity of the solution. In its manufacturing details, no drug or chemical demands more exact attention, and none suffers more from carelessness or ignorance of its physical qualities.

Dioxogen will continue in the future, as in the past, to answer all the requirements of a perfect antiseptic and disinfectant by giving the profession a superior hydrogen dioxid.

Pulv. Bioplasm.—(W. W. Taylor, M. D., 418 W. Fifty-seventh street, New York.)—Miss M. J., a maiden lady, aged sixty-one, applied to me complaining of sciatica. She had also taken such quantities of potassa and other drugs as to render her stomach intolerant of medicine or food, which condition had persisted for several days. I prescribed

℞ Pulv. bioplasm (Schieffelin & Co.)..... $\overline{3}$ ss
Div. pulves No. xx
Sig.—One powder four times daily.

Improvement was noticed from the second day. Prepared food was retained and caused but little discomfort, and gradually the patient's digestion was restored to normal. On the third day, after taking twelve powders, I was gratified to notice that the sciatic pains were considerably lessened, and I advised, in addition to galvanism, hot sea salt baths before retiring, nightly. Only one week of this treatment was necessary to bring such a radical change to my patient that she is almost entirely free from pain, eats meats and vegetables, and her stomach is in a perfectly normal condition. I have secured equally favorable results in several cases of neurasthenia, and also in the anorexia, debility and night-sweats of phthisis. It is derived from the pitcher plant, and seems destined to be of great therapeutic value.

Dr. P. Dolche states that quinine has an important field of usefulness in the treatment of uterine affections. It is very useful in congestive dysmenorrhœa, by diminishing the flow of blood to the genital organs, and to dysmenorrhœa due to neuralgia of the genital organs. It may also prove useful in amenorrhœa, by stimulating the contraction of the uterus and of the utero-ovarian vessels, which would in their turn stimulate the dormant ovulation. In metrorrhagia and menorrhagia it is effective. The quinine should be given in 8 to 24-grain doses, and may be combined with digitalis and ergot, as may seem indicated.

Interstate Medical Journal.

VOL. VIII., NO. 6. JUNE, 1901.

Issued Monthly for One Dollar a Year.

EDITORIAL DEPARTMENT.

WARREN B. OUTTEN, M. D.,	-	-	-	} EDITORS.
WILLIAM PORTER, M. D.,	-	-	-	
R. B. H. GRADWOHL, M. D.,	-	-	-	
OTHO F. BALL, M. D.,	-	-	-	
				MANAGING EDITOR.

Address all communications, news of medical interest, subscriptions, etc., to the INTERSTATE MEDICAL JOURNAL CO., COMMERCIAL BUILDING, ST. LOUIS, MO.

THE PARASITE OF CANCER.

In the May issue of the *American Journal of the Medical Sciences* appeared the work of Dr. Gaylord, of the Buffalo Institute for the Investigation of Cancer, on his efforts in the direction of finding the cause of this disease. The paper embodies the results of Gaylord's work for some time. In it he takes the definite stand that he has found the parasite that causes cancer. His work as detailed in his article consists briefly in this: in the abdominal fluid of a case of cancer of the cecum, he found a small body which he took to be a parasite. Injection of the *fluid* from this case into rabbits produced cancer in them, but Gaylord did not recover the same small body from the animal. Other experiments along the same line were noted.

There is a general indefiniteness about the whole article that savors not of a scientific communication which should be accepted as conclusive proof of anything. In the first place, Gaylord has not proven that he produced cancer in the animals by injection of his parasite, inasmuch as he did not obtain a pure culture of it for injection, but merely used the fluid for injection purposes, and therefore reproduced cancer by simply transplanting cancer cells themselves; an experience that has been done again and again. He obtained no culture at all, nor does he mention how the parasite may be recognized. He gives no pictures of his protozoon, although he gives those of Plimmer and Sanfelice. We must candidly admit that the contribution of Gaylord absolutely throws no light on the

cause of cancer. To our mind it is merely a reiteration of the work of Plimmer and Sanfelice, and a case of history repeating itself. This work of these three investigators has arrayed the profession into two bands: one maintaining that the bodies described are broken-down cancer cells, the other as stoutly maintaining that the bodies are cancer-producing protozoa. We must say that we lean to the side of the first-mentioned faction, in the light of reason and in the absence of definite proofs on the part of the second class.

As an addendum it might be added that Nils Sjorbing, of Sweden, has just presented his work on a cancer "parasite" to the German Surgical Association of Berlin, and the conservatives present, including Israel, Gussenbauer and Jurgens, have received it with scant courtesy, and with the dictum that it is the old, old story—*i. e.*, the Swede demonstrated bits of tissue instead of animal bodies.

CURIOUS CASES OF AUTO-SECTIO CÆSAREA.

R. Loeffler reports a case of auto-sectio cæsarea: a Mohammedan woman, forty-two years of age, who, suffering of osteo-malacia, felt very badly during the last part of her pregnancy, was afraid she might die before the confinement. Intending to save the foetus, she opened her abdomen and uterus with a common pocket-knife. After having removed the child and the placenta she ordered her little daughter to sew up the wound, which was done with a rusty needle and ordinary thread. Loeffler found mother and child in good condition. The wound healed per primum.

This case, certainly rare, is, however, not unique. During the last two decades the following cases of cæsarean section done by the patients themselves have been reported:

Gjorgjewic (*Wien. mediz. Woch.*, 1880) published the history of a case nearly identical to the one mentioned above. The wound was sewed up by a farmer's wife. The mother made an undisturbed recovery.

Madigan (*London Lancet*, 1884) reports a case of a woman of thirty-four years, who opened her abdomen and uterus with a razor and took out the child. In this instance help was not brought, and mother and child were found dead some time later.

Guggenberg (*Brit. Med. Journal*, 1885) was called in to close a perforating wound of the abdominal wall and the uterus, inflicted by the patient herself with a razor. The child was dead, the mother recovered.

Aisenstadt (*Wratsch.*, 1886). A woman of forty years opened her abdomen and pregnant uterus with a hatchet, after a quarrel with her husband. The wound was sewed up, but the woman died the same day. The child was living.

A most peculiar case of this kind was reported by Doctors Serpieri and Baliva (*Gazetta degli ospitali*, 1886, quoted from Gould's "Anomalies and Curiosities" . . .). A woman illegitimately pregnant, at full term, opened her own abdomen on the left side with a common knife. She

opened the uterus in the same direction and endeavored to extract the foetus. To expedite the extraction, she drew out an arm and amputated it, and finding the extraction still difficult, she cut off the head and completely emptied the womb, including the placenta. She bound a light bandage around her body. Then she dressed herself, mounted a cart and went into the city of Viterbo, where she showed her sister a cloth bathed in blood as menstrual proof that she was not pregnant. On returning home, having walked five hours, she was seized with an attack of vomiting, and fainted. Thirteen hours after the infliction of the wound the physicians were called in. The abdomen was irrigated and sewed up. After the eighteenth day the process of healing was well progressed, and the woman recovered.

H. E.

CONCENTRATION IN SCIENTIFIC WORK.

We are not advocates of specialism where the term is used as, too often, a synonym for narrowness. "The man of one idea" is neither a safe physician nor a wise counselor. Deliver us and our patients from the man who is always ringing in his pet hobby and peculiar theory. Such a man looks only through glasses with a limited field, and sees but the organ in which he is specially interested. He ignores all else, and magnifies the importance of this.

Although this danger attaches to all special work, yet it is true that most men should have a life-work in some definite direction. This need not lead him to neglect general acquisition—rather it should stimulate him to become familiar with all that enters into the building of the wall, in order that the key-stone in his efforts may be securely laid.

It is not needed that the physician should abandon general practice to become expert in some chosen line of investigation, but let him at least be, if he can, well grounded in the advanced thought and progress of that special department. Such a man in even a small village may become an authority and be the consultant for the whole district. A physician living in a small mining town in Illinois is deservedly looked upon as the best posted practitioner on cardiac diseases in all that country, and his advice is sought from far and near. Another, in a still smaller town, is one of the best microscopists in the West.

Where it can be done, we believe that practice should be limited to the class of diseases that the practitioner is best fitted to treat. It is a reproach to our profession that in our western cities a surgeon who claims distinction as an operator will attend a case of measles in the morning, operate for appendicitis at noon (funeral three days later), and preside at the delivery of a pickaninny after supper. Such surgeons would criticise harshly an oculist who would set a broken leg or an aurist who would "cut for stone;" yet they will treat anything, from fever to fibroids, and prescribe for all things between hemicrania and hemorrhoids.

Of course, each man must judge for himself how far he can specialize; but we are sure that in so far as he does limit himself to one line of work (not study), he will be more successful and more honored.

TREATMENT OF ECLAMPSIA.

A most interesting paper by Stroganoff (*Monatschr. f. Gebtsh. u. Gyn.*, October 6, 1900) seems to be apt to overturn the routine treatment of eclampsia with chloroform narcosis. On theoretical reflections he concluded that the two main principles for a proper and judicious treatment of eclampsia ought to be the following:

1. In order to prevent new convulsions, the irritability of the nervous system has to be reduced and every external irritation has to be avoided.
2. The vital energies of the patient have to be aided by inciting the action of heart and lungs, and by accelerating confinement.

Acting in accord with these principles, he employed in all his cases of eclampsia the following procedure:

As soon as possible after the first convulsion he gives a subcutaneous injection of one-fourth of a grain morph. mur., and continues to give narcotics during the next twenty-four to forty-eight hours.

The same dose of morphine is repeated in one to two hours, according to the condition of the patient. In very severe cases a third injection may be given, one to one and one-half hours later. Two or three hours after this third dose of morphine (in milder cases after the second) the patient gets thirty to forty grains of chloral-hydrate per rectum, and is kept now under influence of narcotics, by getting twenty to forty grains of chloral-hydrate every six to ten hours. Should she show symptoms of an approaching fit, one-sixth to one-fourth of a grain of morphine is injected. This combined use of morphine and chloral-hydrate gives better results than the exclusive use of either one.

In order to ease the respiration, inhalation of pure oxygen is used (instead of the usual inhalation of chloroform, which, according to the views of Stroganoff, does considerable harm by asphyxiating the patient!). The patient is in a well-ventilated room. Nose and mouth are continually and carefully cleaned from mucus. Every external irritation, every superfluous touching of the patient, noise, dazzling light, etc., have to be avoided.

The action of the heart is incited by giving besides milk for nourishment a mild tea infusion. If the kidneys are not considerably affected some brandy is added. Tinct. moschi, ether sulf., etc., may be used.

Repeated baths, or wrapping of the patient in order to excite perspiration, do more harm than good, as these procedures, both, are too irritating, and obstruct the breathing.

Are any manipulations with the patient unavoidable—for instance, at operative delivery, a. s. f.—chloroform has to be given to prevent new convulsions brought on through these irritations. But chloroform narcosis has to be limited to the shortest time possible.

The results attained by Stroganoff with this scheme of treatment have fully justified his theoretical presumptions. Out of fifty-eight cases of eclampsia which came under his care, and in which his method was applied, *none* died. This result ought to be convincing, as statistics, published by many authors, show that the maternal mortality in eclampsia so far was between twenty-two and thirty-nine, four per cent. (Hofmeister).

H. E.

MEDICAL LIBRARY BUILDING.

It is now something like a year since the St. Louis Medical Library has been in operation, and it has been well patronized by the profession of the city, according to the annual report of the librarian. The funds of the association have not been any too large, but in spite of that quite a good assortment of books and journals are on hand at the institution. The library is at present located in an office building in the western portion of the city.

A project which should be successful is the proposed building of a medical library building for the use of the Library Association and for the use of the various medical societies of the city as an assembly hall. A liberal proposition has been made by a prominent public-spirited citizen to the effect that if the medical profession of the city of St. Louis raise \$10,000 for the purpose of purchasing a lot, that the aforementioned citizen will build the profession a library building on this lot and will turn over the building, when completed, to the profession, to be owned and controlled by them untrammelled. In other words, a pure and simple gift to the profession is offered of a medical library building costing perhaps \$60,000 or \$70,000. It is now before the profession to get together and collect this small sum. It goes without saying there should be no difficulty in raising this money, inasmuch as there is a large profession here, and many of the physicians of the city are in a position to give handsomely toward the original \$10,000 fund.

The profession should start immediately in their efforts to raise this money, for it is a magnificent opportunity for them to own a handsome library building, which will be a credit to the profession and to the city. At the last meeting of the Medical Society of City Hospital Alumni, an organization always in the van in the direction of furtherance of scientific enterprises, a resolution was passed, giving into the hands of a committee of three the task of raising \$1,000 from the *personnel* of the society as a tithe of the total sum of \$10,000. We anticipate no difficulty, and if there is any *esprit de corps* in the remainder of the profession outside of this society, the other \$9,000 should be speedily forthcoming. We welcome the idea of this coming monument of medical progress in this city. It will serve as a wedge in the removal of the odious lethargy which is said to weigh down on our St. Louis profession, and will serve to enhance their standing in the eyes of our brethren of New York, Philadelphia and Chi-

cago, where, sad to relate, we are regarded as somewhat "antique" in our ideas, progress and scientific attainments.

THE SERO-DIAGNOSIS OF TUBERCULOSIS.

We know that the use of tuberculin as a diagnostic agent in tuberculosis is sometimes attended with failure, and that it is often not deemed advisable to use it in the human being, for both esthetic reasons and for reasons of safety to the patient. It will be interesting to know, then, that the sero-diagnosis of tuberculosis seems now to be well-nigh accomplished. This work was begun by the two French observers, Arloing and Courmont, who secured an agglutination of tubercle bacilli by mixing them with blood from tuberculous patients. According to their last publication in December, 1900, they had studied over four hundred cases. In one hundred and ninety-one cases of tuberculosis of the internal organs they found the reaction positive in 87.9 per cent. In forty-five patients with tuberculosis of the bones, joints, etc., they found the reaction positive in 76.6 per cent. In one hundred and thirty patients with various ailments who showed no positive signs of tuberculosis they found the reaction positive in thirty-four per cent., and twenty of this last class of cases showed, at autopsy, gross signs of tuberculosis. Finally, in forty-one healthy patients the reaction was positive in twenty-six per cent.

This opens up a new field of diagnosis in this disease, and promises to give the internal medical man decided help in the diagnosis of obscure tuberculous troubles. Good results have been obtained by other workers, although some have declared their lack of success in following out the procedure. These failures can be due to the difficulty of obtaining the proper cultures and material with which to test the agglutinative properties of the tuberculous patients. Behring has used an emulsion of tubercle bacilli for this work, and with good results. Romberg, who discusses the subject in the *Deutsche medicinische Wochenschrift* for May 2, 1901, asserts that he has used Behring's emulsion with good success, and that it worked even after standing for some time.

The importance of this test is just as great in given cases as is the Widal test in typhoid fever. It is especially in obscure cases that its merits will be seen. It has failed, it is true, in the hands of some. So has the tuberculin test. The two tests ought surely to cover all cases. Strange to say, the sero-diagnostic test has not been as successful in cattle, etc., as it has been in man, but this may depend upon errors in technique. The work is still in its infancy, but we have great hopes for its ultimate importance and worth.

THE TREATMENT OF ABDOMINAL GUNSHOT WOUNDS.

Why did Sir William MacCormac say so tersely and drastically, in speaking of the treatment of gunshot wounds of the abdomen in the soldiers wounded in the Transvaal War, "A man with a gunshot wound

of the abdomen in this war, if operated upon, dies; if left alone in quietude he recovers?" This is the query that has been well discussed and answered by Peterson, of the Heidelberger Clinic, in the *Muenchener medicinische Wochenschrift* (April 9, 1901).

It was found that in the Boer War that the fatality following operation in gunshot abdominal wounds was very great, while it was exceedingly low in those cases not operated upon but treated by the expectant method. This was found upon investigation to be due to the following causes: the operations for perforative gunshot wounds were performed by the English surgeons under the most trying conditions; for instance, with flies covering the intestinal coils in swarms, the patients themselves being worn-out by long marches, hunger, etc. On the other hand, where no operation was performed the patients often recovered, even though there was one or more perforations. The wounds made by the small caliber Mauser bullets of the Boers often closed spontaneously, both on account of the small-sized caliber and the great driving power, and, furthermore, because there was a prolapse of the mucosa and a fibrinous exudation around the hole; another point in favor of favorable termination of these wounds is the fact that in most cases the intestines were empty, and therefore there was not much danger of peritonitis. This statement is well borne out by the old maxim whereby pistol duelists are counseled to take a dose of castor oil before the fray.

The writer of the article sums up and makes the following conclusions:

1. The rules for the treatment of gunshot wounds in military campaigns cannot be followed out in cases in private practice, where conditions are entirely different.
2. In every case (in private practice) where there is a suspicion of a perforation, laparotomy should be made.
3. In the first hours, when the diagnosis is uncertain, every minute of indecision means added danger to the patient, so that "waiting" is far more dangerous than operating.
4. Expectant treatment can only be countenanced under most favorable conditions—*i. e.*, where the patient is in excellent shape and shows no signs of perforation.

THE INTERSTATE MEDICAL JOURNAL.

It is not the policy of the INTERSTATE MEDICAL JOURNAL to call attention to its success, but we have a statement to make to our readers that will no doubt be as pleasing to them as it is gratifying to us.

Eight years ago our journal began in a modest way to represent the medical profession of the great West and Southwest. It was at a time when the mania for publication was abroad in the land, the mails were filled with "specimen copies," and it was hard to secure favorable recogni-

tion. When the present management obtained full control, it was determined to place the JOURNAL upon a financial and literary foundation, the soundness of which could not be questioned. How well we have succeeded is known. By the law of the survival of the fittest, and as the result of hard, continuous work, the JOURNAL has expanded until it now circulates in every State in the Union, and has a large foreign *clientele*. By the absorption of a number of other journals, it has increased its possibilities and value.

As evidence of the truth of what we say, we can offer two proofs—the first is our large and rapidly growing circulation, which shows the estimation in which the JOURNAL is held by the profession; the other is the amount and character of our advertising patronage. No shrewder class of men exist than those who use the medical press to reach their customers. They must be wide-awake, ethical business men. Such seek the best and appreciate it.

We do not claim to have the only good medical journal in the country. Our exchange tables show many periodicals of which the profession should be proud. We only say that so far as heart, brain and bank account can attain, none of these shall excel us in our continued efforts to improve the JOURNAL, and make it representative in every honorable sense.

THE INTERSTATE MEDICAL LABORATORY.

We desire to call to the attention of our readers the fact that we have established in conjunction with this publication a medical laboratory for the purpose of microscopical examination of all exudates, fluids, secretions and tissues for the aid of physicians in diagnosis. We are prepared to make rapid and efficient examinations, and to this end invite the physicians to send us their specimens for examination.

Our laboratory will be under the charge of our Dr. R. B. H. Gradwohl, Pathologist to the St. Louis City Hospital. He will give careful, conscientious attention to the specimens submitted to us. In another part of the JOURNAL will be announced the fee list, etc.

CLINICAL LECTURE.

CLINICAL LECTURE ON SURGERY.

BY N. SENN, M. D., PH. D., LL. D., of Chicago, Illinois,

Professor of the Principles and Practice of Surgery and Clinical Surgery, Rush Medical College, Chicago.

EPITHELIOMA OF THE LOWER LIP.

GENTLEMEN:—This is the patient upon whom we operated last Thursday for an extensive epithelioma of the lower lip of unusual malignancy. In a comparatively short time the primary tumor developed enormous proportions, and exhibited all the macroscopic appearances of an exceedingly malignant growth. The degree of malignancy was also indicated by the existence of early regional metastasis; that is, I found in the submental and submaxillary spaces enlarged lymphatic glands, so that it became necessary, owing to the extent the disease involved the entire lower lip, to remove the entire lip. I performed an operation with a view of restoring the tissues lost by disease, namely, Wölfler's procedure; that is, I made an incision a short distance from the angle of one jaw to the other, which was enlarged by dissecting the margins upwards and downwards to expose the submental and submaxillary spaces freely, with the lymphatic glands affected, and the normal glands embedded in adipose tissue were removed by careful dissection in one connected piece.

This case proves plainly that the old authors were mistaken in believing that epithelioma of the lip seldom, if ever, gave rise to glandular invasion; yet in this case, as in others that have come to this clinic, we found at the end of a year or six months plain indications of glandular involvement, and we have followed the rule in all cases, when the disease has advanced to any considerable extent, to invariably precede the excision of the primary tumor by thoroughly clearing out the submental and submaxillary spaces in the same manner and for the same reasons as in dealing with glands in the axillary space in operating for malignant disease of the mammary gland. After these spaces were cleared out and the entire lower lip removed, the quadrangular flap was elevated, so that the upper border corresponded with the level of the normal lip. This large flap was then fastened to the anterior surface of the lower jaw by three points of catgut sutures, a part of the operation I place the greatest stress on, because by so doing this immense flap, the weight of which is considerable, is held in proper position, and this suturing has the advantage of excluding at once from the submental and submaxillary wound cavity the mouth, which is such a fruitful source of infection. After the lip was properly anchored, we covered the lower margin of it with Thiersch's skin grafts. I was

anxious to supply the inner surface of the new lip and its free margin with skin. This, of course, is an unfavorable locality for successful Thiersch's skin grafting. We will see now, on removing the strip of gutta-percha, to what extent we have succeeded. I am sure you will all be interested to observe that the free border of the lip is now supplied with a very satisfactory covering of epidermis. All of these large grafts have become attached, and will constitute in the future a very satisfactory and comely prolabium. Instead of mucous membrane, the free border of the lip in the future will be lined with ordinary skin and will adapt itself to its new environment, and probably in the course of four or six months from now will present more the appearance of mucous membrane than of skin.

Skin grafting under such circumstances is, as a rule, a very unsatisfactory procedure. But in this instance we have met with decided success; hence this practice is worth imitating. All of these wounds are healing satisfactorily. The lip is in proper position. I will suggest to the assistant not to dispense too soon with the very important mechanical support for the purpose of keeping the lip at its normal level—indeed, a little above the other—so as to make some allowance for subsequent contraction, which is inevitable. With a strip of adhesive plaster the lower lip will be raised and held up firmly against the upper one during the time required for the healing of the wound and for the epidermization of the inner surface of the new lip.

RELAPSING APPENDICITIS.

Two weeks ago to-day we operated on this patient for relapsing appendicitis. The case interested us at the time the operation was performed, because I found it absolutely impossible to remove the appendix *in toto*. I found the appendix behind the cecum high up, firmly imbedded in a mass of firm scar tissue, which at the same time had formed attachments to the large vessels immediately behind it—the common iliac artery and vein. It was the first time I had an opportunity, in the presence of the class, to demonstrate a modified operation for the removal of the appendix under such circumstances—that is, removal of the organ by enucleation. The enucleation in this case was commenced at the attached side of the appendix by making a circular incision through the peritoneum only and reflecting the coat of the appendix downward and upward in the direction of the displaced organ. I found the organ materially increased in size; it was impossible to reflect the cuff any further, hence the incision was made the whole length through the peritoneal coat, and the organ removed carefully and slowly by enucleation. No ligatures were required. It is an admirable procedure and serves a very useful purpose in preventing accidents, which so frequently happen in performing the ordinary operation to important adjacent organs. The patient has had no untoward symptoms since the operation. The wound has healed throughout by primary intention.

In the next case the operation was performed two weeks ago to-day.

Here I was able to remove the appendix in the usual manner. It was a case of relapsing appendicitis of long standing. I found all the indications of severe catarrhal and ulcerative inflammation of the mucous membrane lining the appendix, with marked destruction on the proximal side of the organ, a condition which explained very clearly one of the clinical features present in this case, and that is incomplete intermission. In relapsing appendicitis the intermissions are incomplete in all cases in which there is permanent mechanical obstruction caused either by thickening of the inflamed mucous membrane narrowing the lumen of the organ, or by a deviation of the axis of the organ, resulting in flexion. Either of these causes or two combined may bring about mechanical obstruction, which interferes with the free outflow of the inflammatory product from the diseased organ into the cecum. In such instances one of the marked clinical features which will present itself is incomplete intermission. This patient always complained of soreness, which he referred to the region of the appendix. As you will notice, this wound has healed by primary intention.

In both of these cases we made the typical McBurney muscle-splitting incision, and in the case which required the removal of the appendix by enucleation, we made an opening large enough to cope safely with the diseased organ.

TUBERCULOSIS OF THE TARSUS OF THE RIGHT FOOT.

You have seen this patient only once since the operation was performed, and the healing process has reached a stage which will exhibit the marked therapeutic value of ignipuncture in the treatment of some forms of tuberculosis, notably tuberculosis of the carpal and tarsal bones. This was a plain case of tuberculosis involving the tarsus of the right foot. I was able in this instance to locate the disease with anatomic precision. I was satisfied, by examining carefully into the extent of the area of tenderness, that the primary focus involved the internal cuneiform bone. We were suspicious that the primary osseous focus had given rise to infection of the adjacent tarsal joints, a condition which was revealed at the time the operation was performed. I made here ignipuncture, penetrating through the surface with the needle-point of the Paquelin cautery, and through the internal cuneiform bone, opening above the adjacent joints. The moment the instrument was withdrawn, synovial fluid escaped from the tubular wound. The next day the patient was entirely free from pain, and he has not suffered from pain since the operation was performed. This tubular wound has filled up with granulations which occupy the entire wound, and present on the surface a very satisfactory appearance. Tenderness has disappeared. The swelling has diminished materially in size. The case demonstrates clearly the therapeutic value of ignipuncture, recommended so highly by Kocher years ago in the treatment of joint and bone tuberculosis, particularly in cases in which the disease involves either the wrist or ankle-joints. The wound remains absolutely aseptic. We have

been careful to guard against post-operation infection, and have succeeded in doing so.

SUPPURATIVE INFLAMMATION OF THE LEFT ELBOW-JOINT.

This patient has been exhibited to you on a number of occasions. He is the subject of a mild form of suppurative inflammation of the left elbow-joint. We found that the swelling involved mainly, when the patient was admitted to the hospital, the upper recess of the joint. I made a number of punctures, and injected carbolic acid into the joint, but was forced to resort to the knife in effecting complete evacuation of the contents of the joint. The wound was then sealed. Since that time we have reopened it on two or three different occasions, under the most careful aseptic precautions, and we have now the satisfaction in finding that this portion of the joint has recovered almost completely from the suppurative synovitis.

I wish to show you this afternoon another part of the joint which is similarly affected and secondary to the primary disease involving the upper recess of the joint. Here, in the region corresponding with the radio-ulnar articulation, you will notice a very large swelling, with slight discoloration of the skin and marked edema. We have all the indications of extension of the disease from the part of the joint primarily involved to the radio-ulnar joint.

Perhaps, either to-day or at our next clinic, I shall open this joint under the strictest aseptic precautions, evacuate the contents, and resort to antiseptic intra-articular irrigation, or I shall simply puncture the joint and make the intra-articular injection through the canula of the trocar. By pressure I am able to force through the opening, occupying the upper part of the small incision, quite a little synovial fluid. The suppurative inflammation of the synovial membrane in the upper segment of the joint is under perfect control.

SUPPURATIVE LYMPHADENITIS OF THE NECK.

I have to show you a case of inflammation involving the lymphatic glands of the neck, a condition so easily mistaken for tuberculosis. In this instance, from the clinical history, as well as from the condition of the pharynx, we had every reason to assume the existence of a pyogenic suppurative lymphadenitis caused by infection through the pharynx. A large, rapidly growing abscess cavity formed around the lymphatic glands, and I removed in this case, as you will remember, the skin covering the abscess cavity, resorting to the vigorous use of the sharp spoon, packed the wound, sutured it only in part, and we have the satisfaction now that in less than two weeks this large cavity has almost completely healed. The healing process has been expedited by planting on the granulating surface at a point where the wound was not sutured a few of Reverdin's skin grafts, which show distinctly in the center of the granulating field.

TUBERCULOSIS OF THE ANKLE-JOINT.

This is the little girl upon whom I operated a week ago for extensive tuberculosis of the ankle-joint. I exhibit this little patient this afternoon for the purpose of insisting that in operations of this kind, where we have reason to believe that the operation has succeeded in rendering the parts implicated aseptic, the dressings should not be removed prematurely. I have not seen the wound since the operation was performed. There has been no mentionable rise of temperature, no pain, no indications calling for the early removal of the dressings. The drainage used in this case consisted of a small strip of iodoform gauze, which has remained in the wound since the operation was done. The limb has been kept immobilized in a plastic splint; we have removed one-half of it, and we are enabled to remove the splint at any time we desire, and again resort to it as a means of fixation by reapplying it over the dressing.

LONG-STANDING SPECIFIC SYNOVITIS OF THE KNEE-JOINT.

This patient was made the subject of clinical investigation by a member of the class, who did himself a great deal of credit in his diagnostic work. The case was very obscure, and I am somewhat indebted to the gentleman who served as my consultant on that occasion for calling my attention to a beginning tabetic condition. This patient was the subject of long-standing, extremely obstinate specific synovitis of the right knee-joint, which finally yielded to repeatedappings and intra-articular irrigation with a solution of three per cent. of carbolic acid. He recently, again, entered the clinic, complaining of pain which he referred to the inner aspect of the left limb. On inspection I found a large swelling at the base of the thigh on its inner aspect and in connection with the ascending ramus of the ischium. I emphasized the fact that in this particular locality we most frequently meet with myxo-lipoma, a very doubtful tumor indeed, and one which is prone sooner or later to undergo transformation into a genuine sarcoma. We were a little reserved in this instance, although the clinical history does not point to any specific infection other than the specific urethritis; in view of the fact that the patient has now reached the stage of beginning locomotor ataxia, we gave him the benefit of the doubt and placed him under very energetic antispecific treatment, because there is just a possibility that the mass which we carefully studied at the time might be a gumma of the adductor muscles. We shall await with great interest the effect of the treatment that we are now pursuing, and I shall show you the case from time to time. The swelling has not increased in size; in fact, it has undergone no change.

INFLAMMATION OF THE FRONTAL SINUSES.

We have a number of new cases to present from the outdoor clinics. This boy will be operated on day after to-morrow. I am very glad to have

the opportunity of presenting him this afternoon, because the case is a somewhat unusual and very interesting one. The original trouble began in the nasal passages. He has had catarrh for years, and I am informed that polypi have been removed from the nose. Only recently the symptoms became aggravated, and new clinical features presented themselves in the form of a swelling which occupies the frontal region immediately over the root of the nose, where, on pressure, there is great tenderness indeed. The patient, at the same time, is subject to so-called neuralgic pain, which he refers to the same locality. He has quite a profuse and offensive nasal discharge. Considering the site of the swelling, the exquisite tenderness, and the spontaneous pain in the new territory involved, it is not very difficult in this instance to make a diagnosis. This is a case of inflammation of the frontal sinuses, caused by the extension of infection from the nasal cavity by continuity along the mucous membrane into the adjacent frontal sinus. I have no doubt we shall find, in opening the frontal sinuses, well-marked evidences of an existing empyema of the frontal sinus. In consequence of the inflammatory swelling narrowing the communication between the frontal sinus, and the nose, obstruction has taken place and retention has resulted. The frontal sinuses are now in a condition of great inflammation, which very satisfactorily explains the most conspicuous clinical features—great tenderness and marked pain.

Rabies and Warm Weather.—The recent epidemic of rabies in Buffalo and Rochester, New York, now under control, points out the fact that whatever else there is disputed about this malady, it is not that it does oftenest occur in warm weather.

The greatest danger lies in a community with many dogs, especially short haired dogs, they being oftener selected than long-haired animals.

There is a prodromatous or quiescent stage, and the furious or active stage, and it is during the former stage that most good may be done by promptly annihilating the animal.

The symptoms presented by a dog who is to be suspicioned of rabies are as follows:

(1) Altered behavior, showing irritability, restlessness and marked change of disposition. (2) Desire to eat dirt, grass, glass or swallow foreign bodies. (3) Tendency to stray, leaving their homes and usually returning sick. This is the quiescent stage.

Now as to the furious stage, the symptoms of which are well known, usually being change in voice, biting, snapping at real or imaginary objects, also the peculiarity of holding on to objects so as to be lifted up bodily. Another curious and important symptom is that dogs affected show no inclination to dodge blows or ward off attacks aimed at them—a sign of marked cerebral disturbance.

ORIGINAL ARTICLES.

KATATONIA.

BY GEORGE BOODY, M. D., of Independence, Iowa.

THE cases cited in this paper, a number of which are illustrated herewith, are grouped under the general term katatonia. These cases were formerly and are still, for the most part, classed variously under melancholia, mania, primary dementia, and stuporous insanity. In recent years only has an attempt been made, first in Europe and later in this country, to classify them under the term katatonia, which is itself a subdivision of primary dementia. In this reclassification we acknowledge our indebtedness to the great German alienists, Kahlbaum and Kraepelin, whose able work along this line has been received with great appreciation, especially in Europe.

Katatonia is a disease of early life. A great majority of cases occur before the twenty-fifth year, one case admitted recently being but fourteen years of age. Between twenty-five and thirty-five, cases are not uncommon; but after thirty-five the disease is seen with decreasing frequency. Kraepelin has recorded a case occurring in the sixtieth year, so that the possibility of its occurrence at any age should be borne in mind.

This psychosis is, as a rule, ushered in by more or less severe depression, without the extreme mental pain and anguish which are so often the most characteristic symptoms of melancholia. Often the patients are silent, dislike companionship, and hence seclude themselves; are aimless in action, unruly, cross and irritable. They show an apparent lack of interest in their immediate surroundings, they become inactive, their energies seem to be at the lowest ebb and they cease to work, though previously they may have been very industrious, and they prefer to spend their time in an immovable sitting attitude or in bed. Sometimes they show hypochondriacal symptoms, and complain of pain in the head and back or, perhaps, in the extremities. Some patients will have delusions, transitory as a rule, and following one upon another, singly or in groups, and rapidly or slowly. They feel that they are objects of persecution; that they are wicked and will be lost; that for crimes they have committed they are to be killed or punished forever; that they are about to die, perhaps during the coming night. Occasionally a patient will shake hands with those about him and bid them good-bye, weeping and showing signs of indescribable suffering. In such, a kind word may temporarily dispel all these false ideas, bring smiles to his face, and the patient himself will admit and laugh at his own folly of a few minutes before. I recently had a case in whom nearly all of the foregoing symptoms were present. Delusions marked the first stage of his insanity; later on he became silent and

listless, would no longer talk about his delusions, and sat quietly, preferably in seclusion.

In some cases at the onset the patients manifest sudden excitement, expressed both psychically and physically; they show great muscular activity and expend their energies in thrusting their arms out in every direction, striking anything in the way, not purposely, but apparently accidentally; they destroy their clothes and bedding, break up the furniture and kick holes in the wall. A recent case showed these symptoms just previous to coming to the hospital. At the same time, he was completely disoriented and there was a rush of ideas with incoherence. He shouted loudly and threatened some one whom he thought blew some substance into his face. His sensations seemed real to him, but suddenly gave way to others entirely different and very imperfectly defined. Other cases see strange things in the air, or upon the walls of their rooms and stare at them long, and with all the intensity at their command, sometimes not willing to tell what they see, at other times saying they see the devil, angels, or perhaps God. Hallucinations of hearing sometimes occur. One case of mine received messages through the ventilators in the room and replied to them in sudden, sharp and almost angry tones, again in a whisper or in a very loud tone, even a shout. Occasionally his anger would seem aroused and he would reply with the vilest epithets, at the same time cursing and swearing; often he would listen intently for some time and make no reply. Some patients show a marked degree of restlessness, walk about uneasily, jump up suddenly, rush into a room as if to hide, or down the hall as if to escape, even knocking over or brushing aside those who may happen to be in the way.

The symptoms which are most likely to attract attention first are described by Kahlbaum as negativism. Patients who have previously talked, become silent altogether, or, if they do speak, express themselves in a few unintelligible words, sometimes almost inaudible. One of my patients speaks almost constantly, even in bed, during the night in a low, guttural tone, repeating: "Let me out of here. I want to go home. Let me out of here. I want to go home." Others talk and laugh to themselves in audible tones, or whisper or merely move the lips without the slightest sound, while at the same time they appear wholly oblivious to their surroundings, and it is impossible to make them reply. Occasionally one may be induced to answer or even read or sing, as did one of my patients, who had previously been a singer of some little note. He would play and sing for a short time in a most pleasing and entertaining manner, and a little later would lapse into his former state of negativism and mutism. Two years ago he was able to sing well, but since then deterioration has been slowly and gradually taking place. During the past month, after many efforts were made to induce him to play and sing, he made the attempt once more, but was unable to do either. Another phase of negativism is muscular inhibition with or without rigidity. If patients are sitting in a

chair, they remain without changing their position unless moved by some one; if in bed, they remain in one position without moving a muscle for a long period of time, not even turning in bed, unless turned by the nurse; even then an unusual amount of muscular strength is required because the resistance is so great. If an attempt is made to take them out walking, they resist; when once out they resist coming into the house again, and must be pushed or even carried along; at meal time they resist going into the dining-room, refuse to eat and must be fed by hand or mechanically; after eating they refuse to get up from the table, and resist going out of the dining-room; they resist going to bed, being undressed and bathed, and must be helped with everything. With many of these patients there can be noticed one almost constant movement, a blinking or vibrating movement of the upper eyelids and a turning down of the eyeballs to such an extent that the cornea is hid by the lower lid, or *vice versa*. If the head or body is raised it will fly back, as though maintained in position by a spring, as soon as the hand is removed. The face is often waxy, giving it a shining appearance, and there is a placid or mask-like expression. There may be constant muscular contraction lasting hours, days or even weeks and months, as one case who has already gone about fourteen months in a state of strong continuous muscular contraction. At least he has been found in this condition at all times of day and night during these months. Frequently patients with negativism resist evacuating the bowels and voiding the urine when taken to the closet or when the vessel is at the bedside, even when absolutely necessary, and a little later will soil their clothes or the floor or even the bed. They assume every conceivable attitude, lying prostrate upon the floor with arms and legs extended, or posing statue-like for indefinite periods of time. If they are placed in an attitude very trying to the muscular strength, they will remain so for an hour at a time (one did so for just one hour), when they gradually relax and take some easy position. This is the so-called cataleptic condition. Their lips remain tightly closed, the saliva collects in their mouths, filling them so that it must be swallowed or forced out between the lips, and causing drooling. At other times they spit about everywhere, upon the bedding, furniture or upon the carpets or floors, and appear to be wholly unconcerned as to the cleanliness of their surroundings. They sometimes close their hands so firmly and so constantly that deep imprints of the nails are left in the palms.

Changeableness is quite a characteristic symptom. Marked depression may appear one day and be followed the next day by any of the other symptoms of katatonia, or the patients appear nearly normal. Muscular resistance, passive or active, mental inhibition, a cataleptic condition or mutism, may appear at any time in the course of the disease. Tonic and clonic impulsive movements are less common symptoms. In these paroxysms the patient falls upon the floor, the body becomes rigid, and following it he may assume every possible attitude before rising from the

floor. He may then suddenly spring to his feet, leap into the air, strike his heels together, clap his hands, rotate on one or both feet and sway the



A GROUP OF KATATONIA CASES.

body to and fro; or he may sit in a chair, describing circles with his body for a time. He may walk or run in a circle or back and forth on the floor

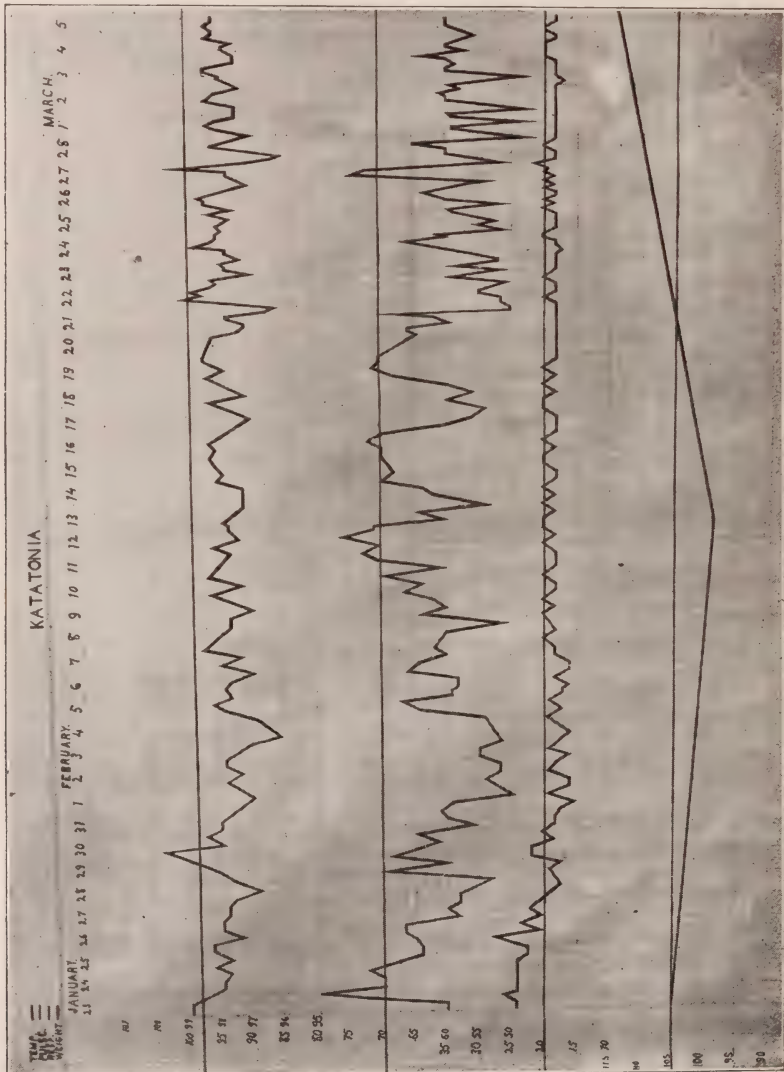
along a particular line. One other patient would sit statue-like in a chair, apparently oblivious to everything about her, but the moment any one attempted to go by she would suddenly and unexpectedly rise, pass in front of and describe a circle about the person, return to her chair and assume the same attitude as before, thus causing no little embarrassment to the uninitiated one. If shut into a room, he may pound on the door or take hold of the knob, and jerk the door back and forth for hours at a time, or stamp upon the floor, seemingly never tiring, and unless restrained there is no possible way of causing him to desist from activity. During these periods the patients often injure themselves and show no signs of pain. I have seen a patient of mine turn a somersault on the hard floor, another leap into a window without warning, breaking out many of the window-panes and injuring himself quite severely; another, without cause, spring upon and strike the person nearest a severe blow.

In a few cases the onset of the psychical symptoms are exactly like those in acute mania. There is a rush of ideas with or without incoherence; there may be shouting, singing, or cursing, or there may be transitory expansive delusions. When the latter symptom is predominant the patient may think he has all power, that he controls the universe, that he needs but to stretch forth his hand, give the command, and everything in it will stand still. Great motor restlessness characterizes this form, and the patient, if crossed in any way, may try to prove his muscular strength. After perhaps two weeks these symptoms subside rather suddenly and mutism and negativism take their place; as with one case of mine diagnosed as acute mania, but on account of later symptoms replacing the first described, the diagnosis was changed to katatonia. Some weeks later the cataleptic condition became the most prominent symptom and continued until the death of the patient from tuberculosis nearly a year later.

Speech disturbances are quite common, and, after a period of mutism, the patient may be constantly crying out loudly, uttering unintelligible words or sentences, using many unnecessary words, a symptom which goes under the name of verbigeration. Repetition of senseless words or rhymes occurs in the writing as well as speaking.

There is still another occasional symptom, the katatonic seizure, which is so striking that it leaves little doubt as to the diagnosis. I have recently had occasion to observe it in three cases, in two of which it occurred twice. A few hours after admission, a patient, a young boy, was taken with what appeared at first to be an epileptic seizure. He suddenly fell down, apparently unconscious, with pulse slow, soft and very easily compressed, and face pale. Upon picking him up it was noticed that the muscles of the body were not completely relaxed, but instead there was a certain amount of resistance. The arm, when raised, remained in the attitude in which it was placed, as in a cataleptic condition. When he first fell there was a quivering of the muscles, but no actual convulsive seizure. His respirations, slow and rather labored from the first, became slower, and

finally seemed about to cease altogether, but suddenly quickened again and approached nearly normal. A little cold water dashed into his face startled him, but a few minutes later, when he became accustomed to it, he resisted and would no longer respond. His eyes were open and bright and moved about in a quiet natural way, and the irido reflexes responded



to light quite promptly. During the attack there was rapid blinking of the eyelids. There was no frothing at the mouth, as in epilepsy. Soon after this attack he drank a few ounces of milk with apparent relish.

The accompanying chart is an accurate picture of the temperature, pulse, respiration and the weight line for six weeks following from the day

of his admission, including the time of the seizure. A similar attack in another patient was more severe, and simulated more nearly a true epileptic seizure, but examination at the time showed the irido and other reflexes to be normal, and there was no biting of the tongue and no frothing at the mouth.

The third case, upon being approached by the physician one morning, shook hands with him, saying at the same time that he felt sick. After a little conversation he began to breathe heavily and rather rapidly, and a marked tremor was noticed, accompanied by rigidity of the muscles. He clasped his hands tightly and moved them up and down in front of him for a few moments. At the end of this time the muscular rigidity disappeared, he was quiet and silent for a short period of time, then arose, walked across the hall to within a few feet of the wall, threw his body toward it, striking it with his forehead with considerable force; turned squarely about, was met and conducted to his seat, where almost immediately a second attack came on the same way as the first. The symptoms were similar until near the close of the attack, when the right leg was elevated and a coarse tremor was noticed throughout it; very shortly after a similar tremor appeared in the forearm on the same side. The face was red and somewhat cyanotic, and hyperhydrosis was so great that the perspiration stood out like great beads upon every part of the face. The attack subsided as before, and in about two minutes he got up, walked about impulsively, at the same time grinding his teeth. He sat down and for a third time the muscles of the entire body became rigid and a moment later relaxed a little. Then a coarse tremor was noticed in the left arm, then in the right leg, then in the right arm, and lastly in the left leg. Following this all the muscles became intensely rigid, while a coarse tremor subsiding into a slight convulsive movement was noticed, the hands being clenched at the same time. The respirations were not stertorous, but at the close of this attack a long forcible respiration was taken and the muscles were rapidly relaxed. The face was cyanotic during this seizure, as before, and this time the hands were observed to be in the same condition. He suddenly got up from the chair, took a drink, and thus ended the third katatonic seizure. Later he felt much fatigued and remained in bed for some time. He says that he is conscious of the onset of the seizures and sometimes retains consciousness all the way through them, that it is impossible for him to control himself; that some irresistible power forces him into these attacks. He has all the other symptoms characteristic of katatonia.

The patient's physical condition may be excellent at the beginning of the disturbance, but there is usually a decline in weight to a marked degree. Among twenty-one cases admitted during the past twelve months, four showed a decline in weight from six to sixteen pounds during the first few months and afterwards gradually increased in weight from fifteen to twenty pounds; six showed a gradual loss up to the present time of from

eight to twenty-eight pounds; four showed an increase of from fourteen to twenty-three pounds, and then a decline of from three to twenty-seven pounds; five increased from five to forty-three pounds, while two remained stationary. The skin often becomes dry and rough, though the hands and feet are cold and clammy; the muscles diminish in size and become soft and flabby; the body temperature is subnormal much of the time, but occasionally goes about the normal line. Whether above or below, it varies as illustrated in the accompanying chart. In what per cent. of cases this variation in temperature is present has not yet been determined. The pulse, like the temperature, is subnormal, variable, slow, soft, diminished in volume, and is easily compressed. The respirations are also slow, and the respiratory movement scarcely perceptible, though at times there may be forced and very rapid breathing. The pupils are occasionally observed to be dilated and the reflexes exaggerated. Constipation and scanty urine are the rule.

With all the foregoing physical and psychical symptoms the diagnosis is, as a rule, quite easy; but it is well for the diagnostician to be always on his guard, for occasionally katatonic symptoms are grafted upon cases of pure alcoholic insanity. Three such cases have been observed in the hospital during the past year. A complete and accurate history of the patient previous to the time of his admission is one of the most valuable aids in making the differential diagnosis in these cases.

Scientific investigation has barely begun in this country, and so far nothing definite is known as to the exact cause of this psychosis. Kraepelin regards it as a deterioration process, and thinks that there are structural changes in the brain.

Among twenty-one rather recent cases, all in the hospital at the present time, six very typical ones are without any assignable cause. Investigation from the clinical side has so far thrown no light upon the subject of causation. Whether cell changes in the neuron alone, or pathological processes in other organs of the body, or both combined, furnish an organic basis for this condition, can only be determined in the future by correlating the findings of the clinician and the pathologist. To this end the institution in which the patients just mentioned have been studied is working. To say that the psychosis is due to any ascertained structural changes at the present time is premature. Heredity is traceable in nine of these cases. Worry is assigned as a cause in two others. Religious excitement, traumatism, defective development, and typhoid fever are given as causative factors in the remaining four.

This lack of knowledge as to the cause makes it impossible to do more than treat symptoms. Until the search-light of science has been brought to bear upon every part of the field in this branch of medicine and has revealed to us the exact lines along which we may travel to attain success in the treatment of these mental disturbances, we must grope our way, guided by experience alone. Placing the patient in bed on rest treatment

is of first importance. There, in quietude, away from irritating influences, physical strength may be regained, the tissues rebuilt and the patient's energies restored to such a degree that perhaps he will be able to withstand the ravages of the awful mental storm that is raging within. While the storing up of strength and energy is going on, the mental symptoms may, and often do, subside, perhaps suddenly, and the patient ultimately becomes an active and useful citizen again. This treatment should be persevered in from a few days to weeks and even months, as the case in hand may require. I have found it of exceedingly great value in all other forms of insanity as well as in katatonia. This treatment enables the patients to go to their homes much sooner and with the feeling that they have received all the care and attention that could be given to them. While the rest treatment is of primary importance, there are adjuncts which must not be neglected. The first of these is good nourishing food, which, if the patient refuses to take of his own accord, must be administered mechanically. The stomach tube, using liquid food, must be resorted to at least twice a day, or, better, three times in twenty-four hours. If internal medication is necessary, and there is a refusal to take it, the stomach tube must be resorted to again as often as is necessary, for days or even weeks, until the patients again take the required nourishment and medicine of their own accord. In a few cases a soft tube was used through the nose as many as six times daily for three weeks with no bad results. Artificial feeding has been employed for four years in one case with every appearance of good nutrition. Occasionally a case continues to fail in spite of proper nourishment, and in a few such I have found that lavage was beneficial, and used one pint of normal salt solution one hour before each feeding time. This treatment was continued for nearly three weeks in one case, and soon after it had been begun the patient's general appearance was noticeably better and an increase in weight soon followed. The use of leaf lard inunctions once in twenty-four hours, preceded once each day by a sponge or tub-bath, is found to be very beneficial. Patients often take on flesh quite rapidly, a gain of one-half, three-quarters or even one pound a day being recorded. Katatonics, however, as a rule, gain more slowly than patients with other forms of insanity. The lard inunctions soften the skin, which in many cases is dry and scaly, and make it pliable, thus relieving the unpleasant sensations which always accompany such a condition. Many of the patients fall asleep after each treatment and rest for an hour or more, waking up much refreshed. Massage goes hand in hand with inunctions; the first aiding in building up the organism, and the latter soothing and at the same time stimulating every cell of the structures manipulated. The sluggish circulation is accelerated and the pale skin made to glow; the starving cells are bathed with life-giving fluid, and thus much is done toward reconstructing the physical being. As much attention should be given to prescribing massage as to any drug. The kind of movement for each particular case, the length of time re-

quired, and the amount of force to be used should be ordered by the physician according to the indications, in the same way that he would prescribe strychnia, nitro-glycerine or other drugs. Used in this way, its value can scarcely be overestimated. Tonics, stimulants, alteratives, digestives, sedatives and hypnotics each have their place and must be prescribed as the special requirements of each case may indicate. Constipation is quite a constant symptom, and in addition to the usual drugs, normal salt solution in doses of from one-half to one pint every four hours is of value, and its action as a diuretic as well as a laxative is worthy of consideration.

Since this psychosis is essentially a degeneration, familiarity with it forces upon the thoughtful man the pitiful futility of attempting to cure and prolong the life of these poor unfortunates, if, at the same time, we are not taking measures to protect our race from the ever-deepening current towards deterioration that must sooner or later engulf it in the vortex of degeneracy. Within the walls of the alms-houses and charitable institutions, we are preserving the life that scattered through the length and breadth of our land, will multiply and bring forth a race both mentally and physically defective. This should not be. We cannot long allow the life-blood of our race to be vitiated in this way and cannot long resist such contamination. Is it not the truest charity to find a method of giving such treatment to every individual who enters the alms-house, a charitable or penal institution, that when they again emerge from its doors they may be useful citizens and live happy lives, but be forever incapacitated from reproducing their kind? Such vigorous treatment of this appalling problem must surely be given by physicians of a future generation.

In conclusion, a few words concerning the prognosis in katatonia might not be out of place. Since it is a deterioration psychosis the patient in the course of a few years, or sometimes earlier, gradually drifts into dementia of varying degrees, after repeated attacks. As a rule, the patients are fairly well endowed mentally previous to the first attack, and during this, and even many subsequent attacks, dementia cannot be detected; consequently there need be no hesitancy in saying that the patient will almost certainly recover from the first attack or even the second or third. After this one should be guarded in giving any definite opinion as to a favorable course, because of the dementia, which is now likely to appear at any time. Sometimes the patients recover in the course of a few days, the change coming on suddenly in some cases, while in others it is more gradual. Again, it may be weeks, months, or even years before recovery takes place. Unfortunately, even after apparently complete recovery, there is always danger of a repetition of the attack, which may occur in a short time, or be deferred for years. Since each succeeding attack increases the liability to dementia, in a majority of cases this becomes grave, and is characteristic of the last stage of katatonia.

SOME OF THE USES OF ELECTRICITY IN GYNECOLOGICAL PRACTICE.

BY W. H. WALLING, A. M., M. D., of Philadelphia, Pa.

IN TAKING up this subject, let us first briefly consider resistance and current diffusion. If we use the current in the vagina, uterus, bladder, urethra or rectum, these surfaces presenting as they do less resistance than the dry epidermis, we will get much more pronounced effects from a given intensity compared with the same externally applied; the moisture of these parts materially aiding in the transmission of the current. The size of the electrodes as well as their character will also modify the action of the current, the greatest effect being always noticeable at the poles. If, for instance, we wish to produce a cauterizing effect upon the uterine canal, we must allow twenty-five milliamperes of current for every square millimetre of electrode surface. If the electrode presents ten square millimetres of surface, two hundred and fifty milliamperes of current must be used in order to get the full cauterizing effect. The same effect will be produced whether the electrodes be covered with cotton or not, provided the same sectional area be maintained. If, however, zinc or copper electrodes be used in moist tissues with the anode, the metal will become oxidized to a greater or less extent, thus materially modifying the effect. If too strong a current be applied, or a mild application be too long continued, an eschar will be formed that may prove very troublesome. As a rule, platinum or carbon electrodes only should be used in the uterine cavity. With such instruments and with a current intensity of one hundred milliamperes, a strong cauterizing effect may be produced without danger.

Amenorrhea.—Many cases of amenorrhea being dependent upon anemia, direct stimulation of the uterus is not indicated. In such cases general faradization may be given, and the galvanic current applied by the abdomino-lumbar method, with voltaic alternatives without shock, using from fifteen to fifty milliamperes for five to ten minutes daily or every other day, as may be desired. Later on, if deemed advisable, voltaic alternatives with shock may be given. In some such cases I have given fifty milliamperes by the shock method with good results. It will be better to gradually accustom the patient to the shocks by beginning with mild reversals and increasing from day to day as needed.

In treating cases of suppressed menstruation it is necessary to exclude pregnancy before attempting strong electrical treatment, as there is no more certain feticide than a powerful galvanic or faradic current directly applied to the uterus.

When the patient has recovered strength and the menses do not appear (there being no pregnancy), intra-uterine applications may be resorted to, using the galvanic cathode with a current intensity of twenty-

five milliamperes for five minutes, or a stronger current for less time, sittings being held once or twice a week. In some cases the flow will become established after two or three such applications. Intra-uterine faradization has also given good results, as well as bi-polar faradization of the vagina, alternated with the direct static spark. Of course, any of the treatments just outlined should not be attempted within two or three days, either before or after, of the menstrual period.

Dysmenorrhea.—In some cases the static spark is very useful drawn from the lumbar region, and sometimes general faradization or lumbo-abdominal galvanization will suffice to prevent pain at the monthly period; but some form of intra-uterine electrical treatment may be found to be necessary. This is especially so in stenosis or membranous dysmenorrhea. In such conditions strong cathodal galvanization is indicated. If the stenosis be in the form of a true stricture, mild electrolysis will be sufficient, giving ten to fifteen milliamperes for five minutes, or sufficient to pass through the obstruction. The anode may be placed at any convenient point, say on the abdomen. A case may be cited in illustration: Miss B. had had the cervix dilated until it presented the appearance of having passed through several labors. The canal was patulous up to the inner os, which was only a "pin-hole." The smallest available instrument would not pass, and a special one had to be made for the purpose. An application of only five milliamperes was then made and the stricture easily passed. Larger and larger electrodes were successively used at intervals of one week until the desired size was obtained. (The same method should be pursued in treating strictures of the male urethra.)

If the whole canal be very small, it will better to use a sound that will act upon the entire length at once; but where there are fibrous bands or strictures, bulb electrodes will be preferable. It is not absolutely necessary to wash out the vagina and canal, either before or after such treatment, as the current is aseptic in itself; but it will be as well to adopt all precautionary methods, as in ordinary surgery. After all intra-uterine applications the patient should be allowed to lie down for a while, and in some severe cases, or in debilitated conditions from any cause, it may be better to make the applications at the home of the patient, and keep her in bed. All strong galvanic applications should not be made oftener than once a week or ten days. Time must be allowed for the parts to become thoroughly healed before attempting another cauterization. Many failures have resulted from a neglect of this precaution.

Ovarian Neuralgia.—Where there is no inflammatory condition, but there is a decided ovarian neuralgia to combat, use the faradic current, either with or without the bi-polar electrode. Probably one pole only will be generally used, in which case place a pad on the abdomen and pass the vaginal electrode well up against the painful ovary. Use only a fine secondary coil, beginning with a mild current and increase the intensity up to the extreme limit of toleration and continue the application, without

again increasing the intensity, until the pain subsides. This may take half an hour, or even longer. Repeat when the pain returns, even if it be on the same day. The positive pole should always be applied to painful points, whether the galvanic or faradic current be used.

As to sexual excitement being produced by the current, I may say that I never saw any indication of it in any case. Those who read *The Medical World* for March, 1890, will recall a symposium in my department upon this question, which gave the experience of a number of prominent operators, and all agreed that no such excitement ever followed electrical applications.

The faradic current may be used in the following conditions: Insufficient development of the uterus and ovaries, amenorrhea, subinvolution, superinvolution, displacements, interstitial fibroids, neuralgia, and menorrhagia. The galvanic current may be used in hyperplasia of the uterus, chronic ovaritis, peritonitis and lymphadinitis, pelvic neuralgia, local and reflex neuralgia, mechanical dysmenorrhea, erosions of the neck, and subperitoneal fibroids. Both currents are used in neuralgia, as well as in subinvolution; but in the latter condition the primary faradic is to be preferred.

Erosions.—Use a carbon electrode in ordinary cases; but zinc and copper may also be used. From five to fifteen milliamperes will be sufficient, making the application with the cathode, as a rule; but the anode is sometimes necessary, when zinc or copper may be used as an electrode, in which case one application generally suffices. If not, repeat in five days.

Metritis and Endometritis.—Keith says that "there is nothing to compare with galvanism in the treatment of these very troublesome conditions, many cases of which have lasted for years, having resisted every kind of treatment previously used."

In treating these conditions, use a platinum sound. Introduce it into the cavity of the uterus and place a large pad on the abdomen. Apply the two poles according to the following rules: The positive pole being acid, anti-congestive and hemostatic, is most useful in hemorrhagic, congestive or ulcerative forms of metritis. It antagonizes and prevents the tendency to excessive vascularization, and for the same reason becomes the choice remedy for rebellious leucorrhea.

The negative pole being basic, diffuent and but slightly hemostatic, is, on the contrary, used to excite languid or obstructed circulation or the indurations of chronic metritis accompanied by dysmenorrhea or amenorrhea, and will adapt itself with similar success to other inflammatory processes where hemorrhage does not predominate.

A range of ten to one hundred milliamperes will be sufficiently wide to meet most cases, varying with the necessities and the susceptibility of the patient. Begin with a low power and increase as circumstances may require. Sitzings should be from five to ten minutes in duration and be

given once or twice per week, according to conditions and intensity of current used.

In many cases there will be a marked hyperesthesia of the uterine tract, especially of the cervical portion, which should be treated with anodal galvanization. Use a platinum electrode, cover it with absorbent cotton, dip it in a four per cent. solution of cocaine and insert as far as may be necessary, and use from five to ten milliamperes for as many minutes, repeating daily or every other day. The same procedure may be carried out in very sensitive conditions of the vagina, using a carbon electrode in the same manner, but with a stronger current—say fifteen ma., if bearable.

In treating mucous surfaces with the galvanic anode and a bare electrode, the instrument must be kept in gentle to-and-fro motion to prevent its adherence to the parts and subsequent laceration in removal unless the current be reversed for a few seconds.

It must be borne in mind that a weak current applied for a long time is not equivalent to a strong current applied for a short time. In the first case the cells of the tissues can in a measure adjust themselves to the new conditions, having a certain amount of natural resistance, the present and after-effect being entirely different from that produced by a strong current, where, the onset being sudden, the cells are unable to resist, and disintegration results.

It is better not to use a speculum when inserting a uterine sound, but use the finger as a guide. If a small sound cannot be passed, try a large one, as in some of these cases there are folds in the membrane which obstruct the instrument, if small, but over which a larger one will readily pass. Also, if the tip of the sound be too small, melt a little shellac upon it until the desired size be obtained, The shellac can be made as smooth as the metal. I frequently do this when giving intra-uterine galvanization, to prevent action at the fundus.

Menorrhagia.—In a recent hemorrhage, due to a relaxation of the muscular fibres of the uterus, the use of the faradic current is indicated. It acts like ergot, but without the unpleasant after-effects of that drug. The secondary current may be used, with the cathode in the organ, or as a rule, preferably in the vagina, and strong, swelling currents be given by quickly turning on and off the current by means of the controller or by moving the cylinder of the coil rapidly to-and-fro. We must be careful to discriminate in these cases and not attempt to check a hemorrhage with the faradic current, due to an internal lesion of another character.

We will suppose a case of subinvolution with attendant hemorrhage. Using any uterine electrode available, attached to the negative pole of the faradic battery, place the anode on the abdomen and give swelling currents as above directed. At first it will be better to use the primary coil, as the contractions from this coil are less painful than from the secondary, but also are not so strong in character. In either case include the whole coil

in the circuit and regulate the strength with the controller, or if that be not used, by the cylinder over the coil. Swelling currents are of great advantage in relaxed conditions in any part of the body, but in any case, be careful not to fatigue the muscles by too long or too strong an application.

Fibroid Tumors. Bleeding Fibroids.—Only intra-uterine applications with the galvanic anode will avail in the bleeding variety. In some cases the platinum sound will be sufficient, but Apostoli's carbons are better, as one sufficiently large to act upon the whole surface may be used. Introduce the electrode into the uterus, place a large pad on the abdomen (cotton or clay, being used), and act upon the bleeding surface with a current of seventy-five to one hundred and twenty-five ma., as may be deemed advisable. I have never exceeded the latter intensity. The electrode must be gently rotated while *in situ*, to prevent it from "sticking." In the latter case, reverse the current for half a minute, or until the instrument can be easily removed. Forcible removal, without such reversal, will result in more or less hemorrhage.

In treating ordinary fibroids with the cathode, to promote absorption, pain may follow the application and persist for some time. This may be due to the distention of the uterus by the liberation of gases during the cauterization, and it will be better to gently dilate the os, or insert a small catheter, to allow such gas to escape.

Very dense, hard fibroids will yield but little to any kind of treatment. There may be an apparent reduction, but it will be only the result of the absorption of inflammatory exudates, the tumor itself remaining nearly, if not quite, stationary.

Galvano-puncture, both per vaginam and through the abdominal wall, has been practiced, but I have not as yet seen sufficiently good results to warrant a continuance of such procedure.

Pyosalpinx.—Pus in the tubes may be diagnosed in the following manner: If during an intra-uterine application of the galvanic current pain be produced, and such pain is not allayed by the immediate administration of the positive secondary faradic current, pus is present; if it be relieved, pus is not present. This is Apostoli's diagnostic sign, which the writer has repeatedly verified.

Flexions and displacements are to be first reduced, and then the muscles toned up by the use of swelling faradic currents. Treatment may be given every day or every other day, as convenient, one pole in the vagina and the other on the abdomen, the contractions to be intermitted every two or three seconds, the sitting to last for ten to fifteen minutes.

1727 Vine Street.

ANÆMIA.

WITH SPECIAL CONSIDERATION OF THE PERNICIOUS FORM.

BY DR. W. S. LESSENGER, Mt. Pleasant, Iowa.

MORBID ANATOMY AND BLOOD PATHOLOGY.

BY DR. CHARLES HOFFMAN, A. M., Ph. D., of Mt. Pleasant, Iowa.

ANÆMIA.—It is a very difficult matter to find a satisfactory definition for anæmia, which will cover all the various phenomena manifest in this peculiar and baffling disorder. And since we are confronted with such varying views on the pathology of the disease, it is a still more difficult task to attempt a separate and distinct classification of the different types.

Anæmia may be defined as a perverted relation between the two great functions of hemogenesis and hemolysis, which are concerned in maintaining the normal composition of the blood, and in the normal processes of blood metabolism, or the lysis and genesis of blood elements. Hemolysis should be counterbalanced by hemogenesis. Equilibrium may be disturbed either by an excessive disintegration, or by an insufficient renewal of normal blood.

When Addison, in his famous monograph on "The Constitutional Effect of Diseases of the Suprarenal Capsules," first called attention to this primary blood affection, he termed it "idiopathic." However, there is nothing in the pathology of the disease that justifies us in retaining this name.

Stengel in his review of the terms primary and secondary anæmia, says that "they have been employed to designate diseases dependent upon primary disease of the blood-making organs on the one hand, and those secondary to various organic or systemic diseases on the other, and that a close study of these conditions shows that neither of these classifications are practical or founded on absolute facts, and all anæmias, whether of the primary or secondary group, show good evidence of faulty hemogenesis, together with signs of increased blood destruction. The anæmia, therefore, is a mixed one from the view-point of its origin. The attempt to show that certain cases are primary, and others secondary in the strict sense of these terms, has also failed. For it may be doubted whether any or one of the anæmic conditions with which we are familiar owes its origin and continuance solely to disorders of the blood-making organs." He further states, that "primary anæmia, in the sense of a blood disease, cannot have any existence, notwithstanding the eminent authority that has supported this view." Therefore, basing his use on the authority of Ehrlich and Lazarus, offers as a "temporary" suggestion (excluding chlorosis) the following classification:

"*First*.—Simple anæmia, with the subdivisions of (*a*) acute post-hem-

orrhagic anæmia. (b) Simple chronic anæmia. *Second.*—Progressive pernicious anæmia.”

Still this classification is not based upon the original causes of anæmia, but simply upon the distinctions in the anatomy and physiology of the blood. However, it will answer as a substitute until we find a better classification. Simple anæmia needs no further comment. Let us now consider the progressive pernicious form.

Symptoms.—The gradual and insidious onset of this disease is noticeable. Patients can rarely fix any date for the beginning of their symptoms. Friends notice that they are looking pale or jaundiced often before any other symptoms appear. Gradually signs of muscular weakness intervene. The patient is easily fatigued on the slightest exertion. There is great dyspnœa and palpitation, with great oppression in the region of the heart on ascending any heights. These are among the earliest symptoms, as a rule, and generally remain the most prominent ones throughout the course sooner or later confining the patient to bed. Gastro-intestinal disturbances are next in frequency. There is loss of appetite, discomfort after eating, nausea, and at times vomiting. General nutrition is not impaired; sometimes there is an increase in bodily weight. The most striking symptom is the anæmic condition, the extreme pallor of the skin, with almost complete loss of color of the mucous membranes. The skin assumes a lemon tint or a very pale, jaundiced color. The principal feature of the pallor is its evenness throughout the skin, the color being the same in all parts of the face, as a rule, without variations on the cheeks or forehead. Nowhere do we see such whiteness of the palpebral conjunctivæ, the gums and nails. The skin is often soft and smooth, resembling that of fatty degeneration. Some cases show profuse perspiration, others none whatever. Œdema of the lower extremities is often present, sometimes sufficient to cause slight pitting on pressure. However, it is oftentimes entirely absent.

The temperature is generally normal; a rise in temperature is a very common occurrence. The fever is of an irregular type, usually with evening exacerbations and morning remissions, the temperature rarely rising above 103° Fahrenheit, and generally subsiding in a few days. In some cases it pursues a continuous course. The febrile type may be intermittent or remittent; sometimes there are periods of a subnormal temperature. Pyrexia probably bears some relation to the hæmolytic process and tends to confirm the toxic theory of the disease. Some hold it is caused by capillary hemorrhages into the cortical heat-controlling centers. The pulse is readily quickened or affected by exertion, and is frequently observed to resemble the Corrigan, or “water hammer” type. There is often violent throbbing of the carotids and fullness in the head.

Cardio-vascular signs are generally pronounced. The apex beat of the heart is somewhat lower than normal and is situated more to the left, which may be confirmed by percussion. At the præcordium may be

heard an intense, glowing, systolic murmur; at times this murmur is of a grating character, and often mistaken for friction sounds.

Symptoms of organic nervous diseases are much more common in women than men. Headache is generally the only form of pain present in this disease. The absence of other pain is a noticeable point. Some cases experience severe neuralgic pain in the arms on exertion only. Epistaxis and bleeding of the gums frequently occurs. Occasionally the tissues of the mouth get into a very unhealthy condition, with ulceration and loosening of the teeth, as in scurvy. The tongue is sometimes unusually smooth and shiny, but as a rule, it is clean.

Patients are usually more or less despondent and are possessed of a lassitude which makes all labor wearisome.

Morbid Anatomy.—At death, in the majority of cases, the body appears fairly well nourished. Panuculus adiposus is often of a deep yellow color. There is striking pallor of surface with petechiæ at times over lower extremities, with œdema. There is serous effusion in the peritoneal and other serous cavities. On the surface of the heart petechial hemorrhages are often noticed. There is usually a fair amount of epicardial fat. The fibers, if examined under the microscope, show the various stages of fatty degeneration. Lungs are usually bloodless. There is at times œdema of lower lobes and a few petechiæ beneath the pleura. The stomach generally presents marked evidence of glandular atrophy, with occasional thickening of the submucosa. Liver, as a rule, is enlarged and the cells are found in all the various stages of fatty degeneration. The outer zone of the lobules shows deposits of hæmosiderin; the spleen is variable in size and consistency. The pancreas and suprarenals show no changes. The brain is very anæmic, and on its surface is often seen evidence of subarachnoid hemorrhages. The cord often shows sclerosis of the white matter, especially in the posterior columns. Again, there is miliary sclerosis scattered irregularly throughout the cord. The marrow of the long bones shows signs of increased hemogenetic function, viz., the reversion to the foetal type of red marrow.

Pathology.—The pathology of this obscure disease is of great interest. Hunter has probably given the best exposition so far, viz.: "That pernicious anæmia signifies a definite group of clinical and pathological phenomena dependent upon a special form of hemolysis, induced by toxic agents absorbed from the gastro-intestinal tract by two forms: First, excessive production of toxic material in the intestinal tract, or, second, insufficient internal secretion of the ductless glands, viz., thyroid and suprarenal capsules, etc., to neutralize the toxic products of metabolism." The reasons for this may be briefly summed up as follows:

First.—"There is abundant proof that hemolysis does occur in this disease, which is proven by the condition of the blood, showing deformed and disintegrated corpuscles, and the readiness with which hemoglobin escapes and the abundance of microcytes."

Second.—"The presence of an excess of pigment in the liver, spleen and kidneys; pigment in the form of hæmosiderin (iron granules loosely combined) in the cells; in further support of this is the elimination of iron in the urine, and occasional excess of pathologic pigments in that fluid."

Third.—"Hemolysis occurs within the area of the portal circulation, and not in the systemic, as proven by the condition of the spleen and the accumulation of hemosiderin within the hepatic cells of the outer zone of the lobules, and by the absence of hæmoglobinuria. For experiments and researches have conclusively proven that when hemolysis takes place in the general circulation hemoglobinuria results; in pernicious anæmia, however, the pigment, if eliminated by the kidney at all, appears in the form of iron granules or as an excess of other pigmentary matter, regarded by some as pathological urobilin, by others as a mixture of urobilin and hæmatoporphyrin." This theory is further sustained by the fact that in those forms of anæmia which most nearly approximate to it, viz., those due to other toxic agents, to long and repeated hemorrhages, to blood parasites, as in malaria, to cancer, or to syphilis, that such a marked excess of iron is at no time found in the viscera, especially in the liver, as there is in this disease. At the present state of knowledge it is impossible to deny that a hemolytic process, closely allied to that of pernicious anæmia, occasionally intervenes in the course of grave organic disease, and especially chronic gastro-intestinal disorders. It would be incorrect, however, to speak of the accidental supervention of the pernicious process as "symptomatic" anæmia; it should be regarded as a complication rather than a regular feature of the original disease. The doctrine of toxic origin receives further confirmation from the degenerative lesions found in the spinal cord, as already mentioned. Hunter has recently studied seven cases of pernicious anemia and draws the following conclusions from his observations:

First.—"Pernicious anemia is a special form of chronic blood-poisoning, a toxemia."

Second.—"It is the result of a special infection of the digestive tract, especially of the mouth and stomach, and probably, although to a less degree, of the intestines."

Third.—"The chief source of infection is through the mouth, from long-continued and neglected cario-necrotic conditions of the teeth, and sometimes possibly from stomatitis arising from other causes."

Fourth.—"The usual effect of this infection is a chronic infective catarrh of the mouth and stomach, which may in time lead to deeper-seated changes, viz., ulcers of the mouth and tongue, chronic glossitis and atrophic changes in the tongue, and chronic gastritis with atrophy of the gastric glands."

Fifth.—"Evidences of the infectivity of the organisms of dental decay are overwhelming, and in suitable cases the infective nature of the resulting catarrh of the stomach can also be demonstrated."

Sixth.—"Infection is chiefly streptococcal, and possibly derives its special characters from being of a mixed character."

Seventh.—"Such infection the more readily occurs if the stomach or intestines be already, from any cause, the seat of disease."

Eighth.—"The gastric and intestinal irritation (sickness, retching, vomiting, looseness of the bowels and diarrhœa) so often noticed, and which I find to be even more common than is stated (being recorded in close on to eighty per cent. of cases), is the local effect of this infective catarrh, while the excessive destruction of blood taking place in the portal area, is the result of the action of the poisons in the blood."

Ninth.—"The fever so commonly met with is not an accidental occurrence, the effect of weakness, but is a feature of the disease, a result of the infective process itself, and its variations correspond to the variations in the activity of that process."

Tenth.—"Such variations are common from week to week, sometimes from day to day, in the progress of the disease, even when it is running a fairly progressive course."

Eleventh.—"In addition, however, the course of the disease toward the fatal termination is often marked by one, sometimes by *two* periods of marked improvement lasting, it may be, many months or a year or more, followed by relapses. This character of the disease I have come to regard as the result of a relative immunity, unfortunately only temporary in its nature, conferred by the disease itself to an immunity accelerated and greatly strengthened for a time by a suitable medicinal treatment, notably by the administration of arsenic."

Twelfth.—"The above conclusions suggest certain new considerations in regard to treatment, of which the chief are, viz.: (1st) minute attention to the hygiene of the mouth, and especially of the teeth, with the immediate removal of every source of infection there; (2nd) stricter antiseptic treatment of the stomach and intestines; and (3rd) antitoxic serum treatment, with the view of antagonizing within the blood itself the poisons absorbed into it."

We have no reason to admit that in every case of pernicious anæmia, chronic gastritis is capable of producing such severe systemic poisoning as Hunter has noted, and, again, knowing the tolerance of the economy to gastric disorders, and the rarity of fever in those disorders, we are loath to admit that in this disorder fever should be so regularly present.

Adami's theory "that pernicious anæmia is associated with subinfection" has not met with any general acceptance.

Diagnosis.—The most casual observation may be sufficient for the recognition of this disease. It usually develops slowly and insiduously, the patient presenting the ordinary symptoms of anæmia—pallor, weakness, dyspnœa, palpitation, venous murmurs, loss of appetite and impaired digestion, dizziness and fainting, slight œdema and hemorrhages. The general appearance of the skin, the pallor of the mucous membranes, and

the evident breathlessness are sufficient indications of a diminution in the amount of blood, or some of its principal constituents, viz., the red blood cells or the coloring matter of these cells. The pallor in these cases is readily distinguished from the whiteness of pulmonary tuberculosis, the earthy hue of a cancerous cachexia, the muddy tint of malaria, the bronzing of *malasma suprarenalis*, the complexion usually seen in chlorosis, or in sufferers from internal hemorrhages, and in cases of gastric organic diseases, or in various toxic anæmias.

The final diagnosis, however, depends upon the examination of the blood and the clinical course, rather than from any thought of the possible cause.

Pathology of the Blood.—The patient is at times so bloodless that it is difficult to obtain a sufficient amount for examination. The principal feature is the oligocythemia, and this depends upon the severity of the disease process. The number of corpuscles may be as low as one million per cubic millimeter, and may even fall as low as five hundred thousand. Quinke reported a case with one hundred and forty-three thousand. There is no corresponding diminution of leucocytes; in some cases they quite frequently exceed, in the latter stages, the normal amount. Hæmoglobin, although considerably reduced, is not proportionate to the reduction of corpuscular elements. Microscopic examination reveals loss of tendency to rouleaux formation, and the cells display a marked alteration as to size and shape; they assume the various forms of poikilocytis.

Megalocytes and microcytes are both present. The principal feature, however, is the presence of nucleated red cells, suggestive of reversion to the reptilian type. Neucleated red cells have been designated, according to size, as normoblasts, megaloblasts and microblasts. Endoglobular changes of corpuscles also occur, but the principal feature of the blood in pernicious anæmia is the readiness with which hæmoglobin separates from the cells. Leucocytes show no constant change as to variety. There is nothing in the blood which would serve to distinguish pernicious anæmia from anæmia due to intestinal parasites.

Prognosis—The prognosis of pernicious anæmia, as the name implies, is very grave. It usually runs a progressive course with remissions, generally terminating in death. Reports, however, show some cases that have recovered, but in a great majority there is only a temporary improvement. The average duration of cases of pernicious anæmia in this country is from one to three years, rarely longer. In the remissions of the disease the blood count may rise to normal, and the patient seem almost well, but it is very important at such times to be prepared for the inevitable relapse, and not to stimulate false hopes of recovery.

Treatment.—There is very little to add as to treatment. Numerous remedies have been lauded as useful in this disease, but we have yet to discover a specific. Among the remedies most prominently mentioned are iron, arsenic, bone marrow, extract of spleen and thymus gland, intestinal

antiseptics, massage and hydrotherapy, hygiene and dietetics. Bone marrow in some cases seems to cause a slight improvement in the corpuscles and hæmoglobin. Extract of spleen and thymus have been urged, but without success in most cases. Iron still holds a place with many. It is credited with stimulating the bone-marrow and the other blood-making organs. Some action of this kind is also probably due to arsenic, which belongs to the class of remedies capable of acting as anions, and being a powerful oxidizing agent it in this way exerts an influence upon the toxic products of the intestines and thereby reduces the toxicity in the portal circulation.

Much has been written of late upon the use of concentrated saline solution in this as well as other kindred blood disorders. Its physiological action is reputed "to increase the volume of blood, lessen the specific gravity, stimulate the cardiac ganglia and accelerate circulation. Through the increase in the volume of the blood the arterial tension is raised, and a larger blood supply is carried to the vital or blood-making organs. The stimulation to the nervous centers is very marked, sometimes causing great excitement. The functions of the skin, kidneys and intestines are greatly stimulated, and all the organs functionate better under its use; it does not coagulate blood, but, on the contrary, dilutes and keeps it in a fluid state. It has a distinct stimulating effect on osmosis, and thus may influence the excretion of urine and the other secretions of the body. The number of red corpuscles are distinctly increased."

The best results obtained in my experience have been in the combined use of the iron, arsenic and saline treatment, with strict antiseptic precautions in the mouth and intestinal tract, giving special attention to better hygienic conditions and a carefully regulated diet, not forgetting hydrotherapy. Iron acts best in the form of Bland's mass, either in powder or capsules. Arsenic in Fowler's solution, beginning with the minimum dose and increasing to tolerance, which is noted by the condition of the eyes and gastric symptoms. The saline solution is used in the strength here given: Calcium chloride, 0.25 gm.; potassium chloride, 0.1 gm.; sodium chloride, 9 gm.; water, distilled, one liter. Used either as an enema or an intravenous injection two or three times a week at the times of greatest oppression. This treatment has served me in most cases to seemingly supply a new lease of life—for how long I am yet unable to say. In two cases, however, I have observed a general improvement the past fifteen and eighteen months. Remissions have occurred, but of short duration, and on the whole the trend of the case has been toward relief. I have tried these remedies singly, but with less pleasing results than in the combined treatment. I fear there is little to be hoped for in Hunter's suggestion of an antitoxic serum treatment; and we have certainly failed to get good results from the intestinal antiseptics alone, as recommended by him, and very little from the massage treatment advised by Mitchell. That this disease is becoming more prevalent there can be no doubt, or we

are becoming better qualified to recognize the disease, especially in its incipency. At any rate, there have been more cases recorded in the past decade than in any of the preceding ones.

It behooves us, therefore, to search more diligently for the cause of this disorder, and to look closer to our pathology, especially the blood, and to study more carefully for a better method of treatment, particularly as to prophylaxis, with the earnest hope that the anæmias may soon be considered among the already large number of curable diseases.

OTOMYCOSIS.

BY ROBERT M. LAPSLEY, M. D., of Keokuk, Iowa.

THE growth of vegetable parasitic material in the ear in the form of fungus growths complicates quite a good many cases of ear disease, as well as also occurring as a primary disease not uncommonly.

The cause of this trouble is generally some form of moisture in the external auditory canal. It may be a discharge from the middle ear producing the moisture, or it may be due to oils introduced in the ear by the laity for various reasons. These oils become rancid and form a favorable place for development of fungus. Many cases cannot be traced to these causes. They may often occur in a malarious climate, and a low lying, moist district may have these cases developed with frequency as a primary disease. The most common fungi in the ear are the *aspergillus niger*, *flavus* and *fumigatus*, although others are found at times.

The fungus generally grows very rapidly. An ear cleaned one day will usually be filled the day following. The patient will have considerable discomfort, and oftentimes marked pain, which may vary from day to day, and even disappear for a time and then return again, the entire duration being unlimited.

Hardness of hearing generally accompanies it, and often develops into marked deafness. Tinnitus aurium is also present. On inspection the ear is found filled with masses of something that may resemble either hardened wax or pus, and, in fact, oftentimes accompanies either one of these accumulations. On removal, if a primary case, the usual appearance of a dirty gray membrane is present, and the characteristic appearance of the spores is readily seen with the microscope. Both the macroscopic and microscopic appearance is plainly marked. In case it surrounds a plug of cerumen it may be easily overlooked, or in case there is a chronic middle ear suppuration, the fungus growth may not be thought of.

Untreated, or treated without an understanding as to the character of the trouble, it may last indefinitely, while with proper treatment the duration may be cut down to a few days. It yields very rapidly to treatment.

The treatment consists first in the removal of foreign material from the canal by means of the syringe, and forceps if necessary, and following that the use of an antiseptic. Bichloride of mercury, 1 to 5000, allowed to remain in the canal fifteen minutes twice a day, or alcohol used in the same way, always after cleansing, will generally cause the symptoms to disappear in two or three days. Then the treatment continued several weeks will prevent them from returning.

I wish to quote the following rather remarkable case: J. A. presented himself September 22, 1899, with history of left ear having slight discharge a month ago. Ear grew worse until a few days ago it became quite painful. For three or four nights the ear has been so painful as to require morphine to produce quiet. Is entirely deaf in ear, the canal is badly swollen and tender, even to side of face and neck. The general health and nerves of the patient are entirely shattered.

Stringy white substance that was quite elastic and resembled nerve structure was removed in quite long strings. The diagnosis of otomycosis was ventured on, although the symptoms were almost too violent, and the ear was cleansed and alcohol treatment used. The patient was easier from that time, and rested fairly well afterwards, and symptoms gradually abated until canal had normal appearance, and hearing was normal in a few days. The alcohol was continued for some months, now and then, to prevent recurrence, and the case has not relapsed.

Russia and the Alcohol Traffic.—In Russia, at present, an attempt is being made by the government to limit the sale of spirits and reduce the number of inebriates.

The methods are, first, to replace drink houses by tea houses, increasing the tax on all places selling liquors.

Second, by organizing asylums and forcing drinkers to be confined in them, and by the encouragement of societies of temperance by subsidies or other means.

The total consumption of tea at present in Russia is about one pound per year for each inhabitant, or 106,000,000 pounds, and the cost thereof is \$88,000,000, against \$550,000,000 for brandies and other alcoholics.

The consumption of tea is increasing rapidly.



SCIENTIFIC MISCELLANY

Teaching the Blind to See.—According to a Vienna medical journal, Dr. Heller, the director of one of the local blind institutions, has succeeded “in enabling a blind boy of seven years of age, to distinguish objects, and even to read.” He claims that this is the first instance on record in which it has been found possible to impart elementary instruction exclusively through the sense of sight, to a child previously incapable of seeing. He attributes this result “to a great restriction of the field of vision in the case of a patient who manifested considerable sensitiveness to light.” The method adopted was as follows: The boy was first exercised in localizing a point of light in a room which was otherwise perfectly dark. Articles with which he had already become familiar by touch were then placed within the narrow illuminated circle, and he was called upon to distinguish them by sight alone. When the light was passed through colored glasses, the child noticed the difference. By associating the names with the various colors, he was gradually taught to recognize them. After he had acquired the power of distinguishing geometrical forms, he learned to recognize letters and numerals. In the second stage of the treatment the use of the sense of touch was entirely excluded. At present, after fourteen months’ practice, the boy is able to read with the naked eye, and to recognize, localize and distinguish colors, forms and objects at steadily diminishing distances.

This is no doubt valuable but had the child been absolutely blind—had he been unable to ascertain by means of his eyes where the light was in the dark room—Dr. Heller’s methods would have had no result. In other words, his process is only practicable with children who are partially blind, although that partial blindness may approach total blindness very closely.

The Prevention of Phthisis.—In the old Kingdom of Naples, which included the present city of the same name from 1782 to 1860, drastic measures were resorted to in order to exterminate tuberculosis pulmonalis. A physician who omitted to report a case was fined \$200, and if he offended a second time, he was banished from the kingdom for a year. The ceilings, walls, floors, doors and window-frames of the rooms in which consumptives died were removed and burned. Bedding and furniture shared the same fate, and the dwellings could not be occupied for a year after the death of the patient. In consequence of these stringent laws a family

with consumption in its midst was regarded as a nuisance and was shunned. The results of these measures were not encouraging, for from 1860 to 1863, the death-rate from phthisis in the city of Naples was one-sixth or one-seventh of the total number of deaths (Spatwzzi and Somma, in 45th Vol. of *Brit. and Foreign Med.-Chir. Review*, p. 112). There was one thing, however, which was not done in Naples. The sputum was not recognized as the *causa vera* of the contagion, and consequently no attempt was made to dispose of it properly. In Buffalo, an ordinance prohibiting persons from expectorating on the streets and sidewalks has been rejected by the aldermen, but even if it were passed consumptives would expectorate into their handkerchiefs, which would, of course, be equally objectionable. The mortality from phthisis has not appreciably decreased since the discovery of the Koch bacillus in 1882. The process of natural selection—the elimination of those most susceptible to the disease—has been causing a slight decrease for many years. The real solution of the problem is neither the formation of anti-consumption societies, nor ultra-stringent regulations concerning anything *except the sputum*, but a gradual educational process by which the public will learn that the phthisical diathesis is markedly hereditary, and that men and women belonging to tuberculous families ought not to marry. This method, although slow, is very sure; by a similar educational system, both sexes have learned to avoid contracting marriages with individuals who, while not by any means insane, are “a little queer at times.”

Bottled Tears as Medicine.—A physician who has visited Persia says that the natives still believe that human tears are a remedy for certain chronic diseases. At every funeral the bottling of mourners' tears is one of the chief features of the ceremony. Each mourner is presented with a sponge with which to mop his face and eyes, and after the burial these sponges are presented to the priest, who squeezes the tears into bottles.

Cures for Mosquito Bites.—The *Bulletin General de Therapeutique* recommends the following lotions to relieve the irritation of mosquito bites: A ten per cent. solution of menthol in water. This is only suggested if a more elaborate lotion is unobtainable. Commercial solution of formic aldehyde, five grams; alcohol and water, each ten grams. Apply several times during fifteen minutes, and allow the liquid to evaporate. Blotting paper soaked in the solution may be used, if desired. This remedy should not be applied to delicate parts of the skin, nor to places where the skin is broken, on account of its caustic character.

Why Do Dogs Swallow Stones, Sticks, Etc.?—It has recently been asserted that the presence of foreign substances like pebbles, glass and feathers in a dog's stomach show that the animal was affected with rabies. This is by no means correct. The dog is probably suffering from some

stomach trouble, which may have given it convulsions and caused it to act in a manner which gave rise to the belief that it was rabid. When a dog is suffering from one or a complication of the disorders of the stomach or intestines, it will swallow bits of almost anything which comes to hand, hoping to find a counter-irritant and to get relief. A Baltimore physician, whose name I cannot remember, has expressed the opinion that the mere fact of finding foreign substances in a dog's stomach, although no proof of rabies, may indicate cerebro-spinal meningitis, which in its outward form resembles violent rabies, and is apt to make the dog behave somewhat in accordance with the popular conceptions of rabies. The fact that a dog swallows grass, and occasionally a small stone, does not indicate any serious disorder. The acids in the canine stomach are very strong and very plentiful. Sometimes the lining of the stomach becomes so charged with these acids, in excess of the quantity required to digest the food upon which the animal has been living, that the sufferer seeks an irritant which acts upon the walls of the stomach and causes an artificial flow of the acid. Grass is the counter-irritant provided by nature, and the one the dog prefers. It does not choose smooth grass, but that which has prickly edges and tickles the little vessels containing the acids. If grass is not around, most dogs will eat hair, which never does serious injury. When neither grass nor hair can be found, the poor animal will swallow other substances, such as stones and wood. The latter is dangerous.

The moral is watch your dog and attend to any signs of sickness. Do not assume that he has rabies because he swallows foreign substances.

"To Regenerate the Human Species."—According to a Paris dispatch to the *New York Times*, a certain Count St. Ouen de Pierrecourt, who died recently, bequeathed to the city of Rouen his fortune of ten million francs—\$2,000,000—on the novel condition that the city shall annually give a marriage present of 100,000 francs to a couple of giants, in order to regenerate the human species. The candidates are to be medically examined, and the healthiest couple must be chosen.

Unfortunately, gigantism and health very seldom go together. Had the French gentleman left his millions for the purpose of scientific education, much more might be accomplished, for even if a nation of persons of great size could be produced—which is improbable—they would present most of the characteristics of the giants of today, many of whom are monstrosities.

Concerning the Size of Soldiers.—The untrained big man can beat the untrained little man at fisticuffs or in a wrestling match, but in trained armies weight has no advantage. The small-limbed Romans defeated the large-limbed Germans as long as their armies were recruited from the cities and villages of Italy. The wiry little Roman, from all accounts, must have been one of the best soldiers who ever lived. It was after Rome

had enlisted the big barbarians in thousands that she was defeated in battle. The slight and pallid Saracen drove the picked soldiers of Europe out of Palestine. If armor is any test, the heroes of the middle ages were comparatively little men. Of the men who fought at Jena in 1806, the Frenchmen were probably ten per cent. smaller and lighter in weight than the Germans, Pomeranians, and Poles, all of whom were defeated by them.

The native regiments of the British army in India are men of great size, yet during the mutiny of 1857, the Englishmen, who averaged two inches less in height, thrashed them very thoroughly. It is true, of course, that the latter had the benefit of the white man's brain, which is the best brain there is. The Japanese defeated the Chinese, and experienced officers who have watched the little Japs in action believe they would be able to beat the Russians. The "light" English regiments, such as the one called the Rifle Brigade, have shown in South Africa that they are the best in the service. The low stature of the Zouaves (the most distinguished French fighters) has often been commented upon, but they are first-class soldiers. The truth is, that weight and height have very little to do with fitness for soldiering, and men of moderate size are far better soldiers than men of six feet and over.

A New Kind of Sulphur Bath.—Harrogate, in Yorkshire, England, has a novelty in the way of a sulphur bath. Briefly described, by the application of electricity in a sulphur bath a man is converted into a "sulphur-coated" being. In other words, the electricity, acting upon the sulphur latent in the water, deposits the latter upon the skin of the patient in much the same way as electrolysis covers metallic goods with a plating of gold or silver. This process, according to the local practitioner, whose experiments have led to its discovery, is much superior to the ordinary sulphur bath in certain skin affections. The benefit, he says, is both greater and more rapid, for he finds that the deposit of sulphur actually placed upon the skin by electric influence is much more effective and curative than that nascent in the water. It is, in fact, driven into the skin, and thus keeps up the curative action until the next bath. The physician's experience with some of his patients is cited to support his theory, and the report of a chemist is added to show that an electric current passed through water will liberate sulphur at the positive pole by direct electrolysis of the sulphides and of the dissolved sulphuretted hydrogen, and so lead to the deposit of sulphur upon the skin.

Is not this method of treatment worthy of investigation by physicians who make a specialty of skin diseases? At any rate, the accuracy of the above-named facts could be determined.

The Callosities Upon Horses' Legs.—The writer will be under obligations to any reader who will furnish him with any hypotheses concerning the origin of the callosities upon all the legs of the horse and upon the fore legs of

the ass and the zebra. They are not the remnant of the inner toe, as some writers would assert, for if they were they would not be above the so-called "knee" (wrist), as they always are on the fore legs. Moreover, the inner toe has been the first to disappear in all ungulates. It has been suggested that these callosities are the remnant of an odoriferous gland, but the writer has not been able to find anybody who has examined sections of them microscopically in order to ascertain if they resemble glandular tissue. This should, of course, be done by somebody who is familiar with the appearance of such tissue under the microscope.

Rings Through the Tongue.—The Rev. T. R. Buckley, of the Church Missionary Society, who has been working in Central Africa, states that the unmarried girls of the "little-known tribe, the Bakedi, wear rings through holes in their tongues." He gives no further information, so we are unable to form any opinion as to how it affects their speech. I hope to return to this subject upon a future occasion when more definite information can be given.

The Cure of Lupus by Light.—Dr. Finsen, of Copenhagen (Sweden) claims to have discovered a remarkable cure for lupus. He has found that light destroys the pathogenic power of the micro-organisms and that nature does the rest. The rays of an electric lamp are directed to the diseased part continuously for three hours at a time, and in the end what appears to be a complete cure is brought about. The ulcers disappear without treatment. Sunlight would probably do equally well, but three hours' continuous sunlight is not obtainable every day in most large cities, and electricity has to be resorted to as a substitute. Every beam of light contains chemical, heating and luminous rays. For Dr. Finsen's purposes the heating rays are not needed, and the electric beam is passed through an aqueous solution so as to intercept these and permit the light without heat to fall upon the patient's face. This treatment is now said to have passed the experimental stage, and it is being used in at least one London hospital. Equally good reports are given by physicians of New York and other cities of this country.

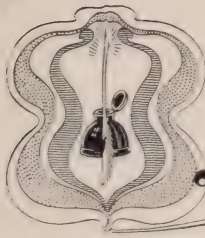
Smoking Contests.—Two hundred and sixty-six smokers have lately taken part in a smoking competition organized by some enthusiasts—or lunatics—in Belgium. The first prize was awarded to a person named Devos, who kept his pipe alight for one hour and fifty-three minutes. The second and third prizes were given to individuals who smoked incessantly for one hour and forty-three and one hour and forty-two minutes respectively. Last year a "record" was established by Mertens, of Louvain, whose time was two hours and three minutes. This individual is called the "champion" of Belgium. It is proposed next year to hold an international contest for the "championship" of the world. Let us hope that

Americans will show their sanity by refusing to compete. Smoking in moderation—say three medium sized cigars a day—probably does no harm to any man in ordinary health. But there is no more sense in a smoking contest than there would be in an eating or drinking competition.


A Glimpse of Ancient Medicine.—There is little doubt that the Romans gave medical qualifications to women, but we have been unable to ascertain how numerous the lady physicians of the Latin era were. A woman practitioner possessed a cure for colic which consisted of snails, burned horn and wine. A male physician is believed to have paid a considerable sum of money for this prescription, which is no more absurd than many of the “drugs” mentioned in the homœopathic pharmacopœia of the present day. Unless our information is seriously at fault, tincture of bee-stings (*apis mellifica*) and a “medicine” made from bed-bugs (*cimex lectularius*) are still a nominal part of the *materia medica* of the men who profess to follow Hahnemann. The chances are that they are not used.

A Roman physician is reported to have cured a young man of blushing by causing him to eat some part of the flesh of a hawk, and another doctor prescribed the powdered lung of the hawk for asthma! In some of the hospitals, however, measures which are scientific were employed. For example, story-tellers were paid to amuse the patients and to keep their minds away from their diseases. Why cannot we have both musicians and readers in our modern sanitary hospitals? No neurologist doubts that these aids to medicinal treatment would be valuable in some nervous disorders; and one result of neglecting them is that the quacks resort to them, and, *mirabile dictu*, occasionally cure a case without dieting the patient, without any hygienic treatment, and without drugs.

The Excretion of Arsenic by the Hair.—From recent researches of Prof. Gautier, of Paris, we learn that the hair acts as a means of exit of arsenic from the human system. It seems probable that arsenic may be detected in infinitesimally small amount, of course, in ordinary hair, but when arsenic is taken medicinally, for example, an appreciable amount of it is revealed by an analysis of nature’s head-covering. In a case of arsenical poisoning by beer in England, the proportion of the drug in hair rose to one part in ten thousand. While the fact of the hair apparently forming a natural channel for the excretion of arsenic is notable, it may readily be understood that this line of research may be of value in other directions. The skin is well known, of course, as an organ whose chief duty is connected with the excretion of bodily waste, but the idea that the hair shares this function is novel. In cases of alleged murder by arsenic the toxicologist may find in the analysis of the hair of the victim a corroborative proof of some importance.



Personal Comment



Warren B. Outten.

A Few Words Concerning the Sociological Position of the Physician.—

The position of the physician, from a sociological point of view, is one of well-defined honor and respect. Viewed from the standpoint of commercialism, he amounts to *nil*. Politically, his influence is negative. His influence is felt only in the same way that influence of the unambitious and loyal citizens is felt. He is law-abiding, honest and patriotic. View the physician comparatively to members in other learned professions, as to his usefulness and the rewards of that usefulness, he is only accorded a position of mediocrity and well-confined influence.

The power of the physician's intellect, no matter how great, only reaches a limited circle and never assumes the rightful position which an intellect of equal power attains in many other callings. The world assumes, for some unknown reason, that when a man becomes a physician, either of prominence or otherwise, that he is only fitted for the particular calling of medicine. Rarely, indeed, is the physician consulted concerning questions of importance to the State, even though his intellectual capacity and fitness may be infinitely superior to a great majority. There is no denying the fact that to the ambitious, medicine offers but little that the ambitious seek: power and influence are not the rewards to a votary in medicine. Fame, indeed, rarely crowns the most intellectual and superior efforts of the physician, and even when it does after a lifetime of the most arduous effort, he is less known to the world, less known to the general public, than some vaudeville artist.

It is a remarkable though an eternally patent truth that a soldier or sailor will attain more fame with less intellectual effort than any other calling on earth. A single brilliant episode, where there is less true intellectual effort, less mentality, less of all that goes to make a truly great man, will be emblazoned over the face of the earth, while a lifetime of brilliant, unceasing and powerful intellect in the calling of medicine will only make this person known to the student and the narrow confines of some particular country. His (the physician's) reward in honor, fame and finance is confined to narrow limits. The physician faces in his calling the antithesis of all of life's paradoxes; he is supposed to heal the sick and prevent death, and in the end all men die. He combats disease and death, while God's eternal fiat stamps death upon all that has life. Fact, of course, shows the benefit of medicine. Still, the doctor, with all

the power he has, is never able to stay the hand of death when nature reaches the culminating point. So thus at best, view the physician in the broadest light, view him from the most favorable point of view, he yet remains unsuccessful. The physician may heal mankind, accomplish wonderful results, but his power suggests possibilities unattainable, hence an opinion in mankind places him in a position where the true and real merit of his accomplishments is rarely if ever viewed in its true light. He may save a life to-day, but lose it to-morrow; thus a like effort is lost in a human-like way. Man has grown to admire the destructive elements of life; his worship must have a background of tragedy and death.

There is no doubt but that there are causes which lead to the present position of the physician, and to our minds they can be traced in many ways. The physician of to-day should be the most altruistic of all persons, and yet he is far more egotistic than members of other intellectual callings. We say it, for we believe that it is the truth, that there is less of altruism in the real meaning of the word amongst the medical profession than any other profession, and yet their calling would seem to be based on altruism. Go to any community, even the most learned and intellectual, and it will be found that the medical profession of that community is racked with bickerings and jealousies. They form societies and gatherings for the sole benefit of themselves alone; while they seek to benefit others, yet the benefit of self is the motive. It is established through ages of action and become almost proverbial that the doctors of medicine must differ. Medicine can never assume the position which the intellect of its members entitle it to assume, until the best of altruistic feeling pervades it. When the medical profession will unite in an altruistic endeavor, then will it become a body which the world will honor; yes, honor commensurate with the nobleness of the accomplishment. Christ, the master, embodied the true idea which the physician should copy. He was the personification of altruism. Self had no thought with Him. He loved and labored for others. The social body in our present civilization offers a field grand and multitudinous for the display of the most worthy and beneficial altruism.

Let the medical profession drop its egotistical standard and embrace progressive altruism, and it will become a body potent. Let medical societies, instead of confining their proceedings entirely to the discussion of medical cases, study the sociological factors with which they are surrounded. Let them strive in the field of prevention and see if they cannot lessen crime, vice and misery by study and suggestion. We believe that if any medical society will honestly strive to better the community in which they live, they will be raised in the estimation of that community. Let them study the conditions and surroundings of the viceful, the poor and the needy. The State should enlarge its effort in an eleemosynary way, the chronic inebriate ought to be brought under compulsory treatment. There ought to be inebriate asylums, there ought to be maternity hospitals where the pregnant woman can be taken away from squallor and

viceful surroundings, and a coming progeny possibly benefited. On all sides exist conditions which the intelligent physicians with united effort can benefit their country, community and themselves.

Star Dust.—Man, at least the female part of him, takes more trouble in looking earthward for pins and dirt than for stars. From recent researches and investigation, it would seem that cosmic, or star, dust has an important bearing and influence upon things terrestrial. Our earth, according to some scientists, received its first cell life from star dust. If the assertion of these scientists be true, all the life which goes on here on earth is the result of moss-grown fragments dropping upon this earth from the ruins of a celestial world. Star dust is a regular visitant to this mundane sphere, for it is not unusual for various portions of the earth to be caught in the throes of cosmic dust, during which time rich and rare metastatic elements flood the atmosphere. Ships at sea under a cloudless sky have been known to accumulate quite a quantity of star dust, its composition being totally unlike that of volcanic or flue dust, and is of meteoric origin. Here is a field of investigation for some eager student to benefit humanity who can tell since we know that the mosses may undergo immensely low temperatures and yet, under proper conditions, germinate into life. May not this star dust convey some form of microbic life and be the occasion of terrestrial disease? Anyhow, the study of star dust is open for future investigators. Perhaps the bacteriologists may find some new form of germ life existing in star dust. It is sad but true, even with medical investigation, that the terrestrial is studied more than the heavenly. But then what the heavens shower down the earth must take, even the dirt from the stars.

Cremation and Crime.—The increase in popularity of cremation as a means of disposing of the bodies of the dead, and the thoroughness of the process in destroying any evidence of crime about the body, should such evidence exist, must needs interest any municipality where cremation is permitted and encouraged.

The only precaution practiced is to have a burial certificate signed by some physician in good standing, together with a request from some friends or relatives that they desire the body cremated.

The body is thereupon cremated, and should any suspicious circumstances arise after the death of the individual, but very little room for investigation would be found.

MEDICAL SOCIETIES.

The St. Paul Meetings.—St. Paul, Minnesota, was the Mecca of medical men during the last week of May and the first days of June. The annual meeting of the Military Surgeons of the United States was held May 29–31; the American Academy of Medicine, June 1–3; the American Medical Association and its many adjunct societies, June 4–7. The physicians in attendance at the several meetings had a busy time throughout the sessions, but found time to view the sights of St. Paul and Minneapolis, and to appreciate the beauties of the Upper Mississippi and surrounding country. The local profession vied with one another in entertaining their guests, and the meetings were pronounced grand successes both socially and scientifically.

Association of Military Surgeons.—The tenth annual meeting of the association convened in St. Paul, May 30th, continuing three days. The attendance was good and representative of the departments included in the society.

Brigadier-General A. J. Stone presided, the meeting being called to order by Brigadier-General John F. Fulton. Prayer was offered by Archbishop Ireland, and an address of welcome by Governor Samuel R. Van Sant.

By action of the executive committee, Dr. Charles Fenger, of Chicago, was elected an honorary member.

The following officers were elected: President, Major John Van R. Hoff; first vice-president, General R. A. Blood; second vice-president, General Walter Wyman; treasurer, Lieutenant-Colonel H. A. Arnold; secretary, Major Jas. E. Pilcher.

American Academy of Medicine.—The twenty-sixth annual meeting of this society convened June 1st, with President Dr. S. D. Risley in the chair. Among the leading papers submitted were those of Dr. Thos. D. Davis, of Pittsburg, on the "First Year Medical Curriculum;" Dr. Chas. McIntyre, of Easton, Pennsylvania, "Is the Demand for Reciprocity Based on Fact or Fancy?" Dr. J. N. Hall, of Denver, "The Desirability of Reciprocity in Medical Literature;" and the address of President Risley, entitled, "Some of the Ethical and Sociologic Relations of the Physician to the Community," in which he showed that a "most striking characteristic of the medical man is a sense of obligation to the community; that this ethical attitude finds expression, not only in the daily routine of his laborious professional service, but in a pronounced educational influence on all those lines which pertain to the healthfulness of the people and their socio-medical welfare; that this influence is signally exerted in the investigations and control of the relation which our defective classes sustain to

the social body. Almost suddenly the student of social evolution has come to realize that through the altruistic spirit of our civilization a rapidly increasing percentage of degenerates have grown up in our midst, a fact which presents a serious and most complex problem for solution by the new century. Two suggestions are made for its arrest: 1, the legalization of means to prevent propagation of defectives by a sexualization; and 2, by a wider education of the community regarding the importance of selection in the marriage contract and its control by the State. To solve it wisely and humanely will require the best efforts of the churchman and the physician and the statesman."

The American Medical Association.—The association was called to order in the Metropolitan Opera House on June 4th by Dr. John F. Fulton, of St. Paul, chairman of the committee of arrangements. After prayer by Bishop Whipple, Mr. R. A. Smith, of St. Paul, delivered the address of welcome. The address of President Charles A. L. Reed followed, and gave attention to the foreign relations of the association, the fiscal affairs of the journal of the association, a *resume* of the scientific work of the society, the relation of the physician to the commonwealth, the reorganization of the association and many other questions of moment. In conclusion the president stated:

"The changes which I have advocated are essential for the attainment of the purposes of the association and for the fulfillment of the high destiny of our national profession. They are demanded by the changes that have taken place during the last fifty years. The legislative functions have passed from voluntary organizations to the congress and the legislatures, where they belong; but it still devolves upon the profession in the organized capacity, to stimulate, to restrain, or otherwise to control the law-making power. The responsibility of the profession is increased, rather than diminished. Science has come to have a clearer meaning. He who now proclaims a dogma cries alone in the night, while the world sleeps. They who demand a creed may read its varying terms only in the progressive revelation of natural laws. Practice has changed. The depletions, the gross medications, the absurd attenuations, the ridiculous anti-mineralism have given way to a refined pharmacy and to a more rational therapy. Sacrificial surgery has yielded to the spirit of conservatism. Prevention is given precedence over cure. Education implies research and discovery, and all may delve. I proclaim, events proclaim, the existence of a new school of medicine. It is as distinct from the schools of fifty years ago as is the Christian dispensation from its Pagan antecedents. It is the product of convergent influences of diverse antecedent origin. It acknowledges no distinctive title, it heralds no shibboleth. It is a school of human tolerance, of personal independence, of scientific honesty. It is the slave of neither prejudice nor preconception, and abandons the accepted truth of yesterday, if it only be the demonstrated error of to-day.

It places no premium upon personal prerogative, and extends no recognition to individual authority. It makes no proclamation of completeness, no pretention to sufficiency. It recognizes that truth is undergoing progressive revelation not ending to-day, but continuing through the ages. It yields its plaudits to achievement, and recognizes that he is the greatest among men who reveals the most of truth unto men. It greets as a friend him who thinks, though he think error, for, thinking, he may think truth and thereby add to the common fund. It heeds all things, examines all things, judges all things.

"To you, the exponents of this new school, of this new generation, of this new century; to you, representatives of the Democracy of Science; to you citizens of the Republic of Letters, I extend greetings; and here, in our parliament assembled, here, where our will is supreme, I this day invoke upon our deliberations the spirit of liberty, the spirit of courage, the spirit of progress, the spirit of truth."

Dr. J. R. Pennington, of Chicago, presented the association with a portrait of Dr. N. S. Davis, an ex-president of the society, and a committee was appointed to secure the portraits of all the ex-presidents. The secretary's report showed the active membership to be over 10,600, an increase of over 1500 during the year.

The most important event marking this meeting was the report of the committee on reorganization, which resulted in the adoption of a new constitution.

Under the old system, any accredited medical society of a city or State could send one delegate for each ten members to represent it and vote on all subjects. Under the new organization, there will be a "House of Delegates," made up of delegates from State societies, one from each, and one extra delegate in societies numbering more than four hundred members.

The subject of the recent abolishment of the army canteen by Congress, which was taken up by the Association of Military Surgeons and resolutions passed condemning this action of Congress, was again and again brought to the notice of the American Medical Association, but it was ruled that this was a matter which should not claim the attention of the association, and so the affair stood.

The general session of June 6th adopted the report of the nominating committee, electing the following officers for the ensuing year:

For president, Dr. John A. Wyeth, New York; first vice-president, Alonzo Garcelon, Maine; second vice-president, A. J. Stone, Minnesota; third vice-president, A. F. Jonas, Nebraska; fourth vice-president, John R. Dibrell, Arkansas; treasurer, Henry P. Newman, Illinois; secretary, Geo. H. Simmons, Illinois. On motion, the ballot of the committee was cast for Geo. W. Webster, Illinois, for librarian. Board of trustees, term expiring 1904: W. W. Grant, Colorado; John F. Fulton, Minnesota; T. J. Happel, Tennessee. Judicial council: Geo. Cook, New Hampshire; H.

H. Grant, Kentucky; John B. Murphy, Illinois; Philip Marvel, New Jersey; Louis H. Taylor, Pennsylvania; John L. Dawson, South Carolina; N. Fred Essig, Washington. Oration in surgery: Harry Sherman, California. Oration in medicine: Frank Billings, Illinois. Oration in State medicine: J. M. Emmert, Iowa. Place of meeting, 1902, Saratoga Springs, New York.

American Medical Editors' Association.—This society, including in its membership list the representative medical editors and journalists of the country, held the most successful sessions in years. Officers elected for the ensuing year are: Alexander J. Stone, of St. Paul, president; Burnside Foster, of St. Paul, vice-president and Otho F. Ball, of St. Louis, secretary and treasurer.

NOTES OF THE MEETINGS.

Attendance.—The total registration for the American Medical Association in St. Paul reached 1805, which makes the convention one of the largest ever held by the association in the West. The attendance ran about 200 over what the arrangement committee had anticipated.

Scientific Research Fund.—John D. Rockefeller presented the association with \$200,000, to be expended in scientific research under the direction of William H. Welch, of Johns Hopkins University, with the acquiescence of the association. Resolutions were drawn up thanking Mr. Rockefeller for his aid to the scientific research committee. It is not yet decided just how the money will be expended.

Military Surgeons' Banquet.—The banquet of the military surgeons at the Aberdeen was a decided success. Nearly all the delegates were present. The good feeling manifested kept the mirth alive. Dr. A. J. Stone acted as toastmaster, and introduced as the speakers Gov. Van Sant, Col. Charles Adams, Capt. Wertenbaker, Gen. Wheaton, Gen. Priestly, Maj. Griffith, and Dr. Bennett, of London, England.

Medical Temperance Association.—The annual meeting of the American Medical

Association was held with about 200 members present, and the following resolutions were passed:

"WHEREAS, The American Medical Temperance Association, the members of which are physicians who have devoted years to the study of alcohol and its effects, and who are conversant with the work done by scientific men the world over to determine the effects of alcohol when given in any quantity, have noted the teachings of Prof. W. O. Atwater, of Wesleyan University, upon the food and medical value of alcohol, as set forth by him in the pages of the influential lay press; be it

Resolved, That this association utterly repudiate the pro-alcohol doctrines of the said Prof. Atwater, as being contrary to the evidence deduced by scientific experiments, and that his conclusions are unwarranted by the evidence resulting from his own experiments. Be it further

Resolved, That this association regards the teaching of Prof. Atwater as a source of danger to the laity, inasmuch as such teaching contributes towards the increased consumption of alcoholic beverages."

National Legislation Committee.—The committee on national legislation, which reported the canteen question to the general session, is one of the most impor-

tant standing committees of the American Medical Association. The committee has been continued for another year, with the same membership: Dr. H. L. E. Johnson,



DR. GEO. F. BUTLER.

"I'm glad I don't live here. I haven't seen a sick man since I struck town."

of Washington, D. C., chairman; William H. Welch, of Johns Hopkins University, Baltimore, and Dr. William L. Rodman, of Philadelphia.

Major Seaman and Susan B. Anthony.
—Maj. Seaman, the redoubtable leader of



DR. I. N. LOVE.

"I'd like to know how they make air up here; it's the best I ever tasted."

the anti-canteen repeal forces, had a warm half hour with Susan B. Anthony and a dozen other delegates from the suffragists, as he was leaving the Metropolitan Opera

House. "I was alone," said Dr. Seaman, "and I would rather tackle a mob of Chinese Boxers than that crowd again; but I guess I did as good as I could."

Election of President.—The contest for the presidency was a spirited one, Dr. Wyeth being chosen on the second ballot. His principal competitor was Dr. Charles A. Wheaton, of St. Paul. The first ballot stood: Wyeth, 23; Wheaton, 17; Billings, 6. On the second ballot Dr. Wyeth received 25 votes to 20 for Dr. Wheaton.

Section Officers.—Laryngology and Otolology—Chairman, G. Hudson McKuen, Philadelphia; secretary, J. F. Barnhill, Indian-



DR. VICTOR C. VAUGHN.

apolis; delegates to the house of delegates, George C. Stout, Philadelphia, and Emil Mayer, New York.

Stomatology—Chairman, A. H. Peck, Chicago; secretary, E. S. Talbot, Chicago; delegates, G. V. J. Brown, Milwaukee, and A. H. Baldwin, Chicago.

Ophthalmology—Chairman, Frank Allport, Chicago; secretary, C. A. Veasey, Philadelphia.

Pathology and Bacteriology—Chairman, F. B. Wyman, Indianapolis; secretary, W. T. Howard, Cleveland; executive committee, D. A. Stengel, of Philadelphia, W. S. Hall, of Chicago, L. Hektoon, of Chicago.

Diseases of Children—Chairman, H. M. McClanahan, Omaha; secretary, F. X. Walls, Chicago.

Cases of Brain Injury.—"Three Noteworthy Cases of Brain Injury" was the subject of a paper by Maj. G. T. Vaughan. One subject was a young white man, the second a young woman, and the third a negro, thirty-six years old. They were all considered singular and unusual in their symptoms. The white man suffered a fatal injury to the brain, without any fracture of the skull or injury to the dura mater. The woman had a great fracture extending all around the forehead, but the brain was unhurt. The negro was struck by a revolving wheel. The wheel was broken, and the brain was very much injured and a good deal of it lost.



DR. THOS. D. CROTHERS.

Oration on Medicine.—The annual oration on medicine was delivered by Dr. N. S. Davis, Jr., of Chicago, who took for his theme the progress made by medical science in the past century.

The Military Dentist.—Before the section of stomatology a valuable paper was submitted by John S. Marshall, president of the examining board of dental surgeons for the United States army. The title of the paper was "Military Dental Practice: Its Modifications and Limitations." It follows in part:

"The passage of the army reorganization bill, with its section creating a corps of dental surgeons for the United States army,

makes an epoch in the history of modern dental surgery which has never had its counterpart before in the history of the world, the influence of which is destined



DR. JOHN H. MUSSER.

to be far-reaching in its beneficent results and of great importance in the elevation of our educational and professional standards.

"When we take into consideration the fact that modern dentistry covers in its growth and development a period less than



PRESIDENT-ELECT DR. JOHN A. WYETH
In a favorite pose.

the lifetime of many individuals, we have good reason to be proud of its achievements. Sixty years ago there was no such thing in existence as a dental college; a dental journal had not been thought of, or



DR. CHAS. A. L. REED
Delivering the President's Address.

a scientific society organized. The practice of dentistry at this time was, with few exceptions, in the hands of barbers and blacksmiths.

"We have special reason for congratulation also in the fact that the Congress of these United States was the first legislative body in the world to formally recognize the value and need of the beneficent services of our specialty as a department of military medical practice, that we have been given an opportunity to prove the wisdom of its action to our country and the world.

"The whole question, however, of placing dental surgeons in the army was looked upon by many of our national legislators in somewhat of the light of an experiment, and in a certain measure this was true of the war department, and of the surgeon-general. For this reason when the bill was framed it was thought best to provide for the organization of the dental corps upon the contract system, as by this system it would be an easy matter to discontinue it if it should prove unsuccessful.

"Following is the plan in brief outline upon which the army dental corps is organized: 1. The official status of the army dental surgeon. 2. The examination of candidates. 3. The assignment to duty. 4. The regulations governing the dental corps. 5. The supply table. 6. Nosological table and system of keeping records."

Dr. Geo. F. Butler.—Dr. Geo. F. Butler, superintendent of the Alma Sanitarium and editor of the *Doctor's Magazine*, was elected chairman of the section of materia medica.

President-Elect Dr. John A. Wyeth.—The president of the American Medical Association for the ensuing year was born in Alabama, May 26, 1845. He received early education in a military school and during the civil war served in a

regiment of Alabama cavalry. After receiving his medical degree from the University of Louisville and later from Bellevue Medical College, he practiced for a time in his native State, but later removed to New York. Dr. Wyeth is best known to the profession through his text-book, "Wyeth's Surgery" and contributions to current medical literature.

St. Paul as a Health Resort.—In his address of welcome Mayor Smith stated: "St. Paul, as the statistical records of mortality show, is the healthiest city in the world; and it is so, I believe, in greatest measure, because of the high degree of perfection to which the medical profession has brought the science of hygiene.

"Within the lifetime of a single generation the soil upon which you now stand has upheld the Indian tepee. Here the Indian medicine man has, within that period, wrought his charms. The Indian tepee has been succeeded by the modern equipped hospital and the sanitary human dwelling; the incantations of the Indian doctor are forever silenced, and the cold and impersonal influence of medical and surgical science—as typified in the Medicine Man of Civilization—sways the lives and conserves and protects the health and happiness of human society. The change from the old conditions to the new, as illustrated in fifty years of life in the Capital City of the Great Northwest, is such as not only the members of your profession but humanity itself should rejoice in."



SECRETARY GEO. H. SIMMONS.

The most Perfect Form of Dosimetry is afforded by

PARVULES

THE term Parvule, from *Parvum*, (small) is applied to a class of remedies (Warner & Co.'s) in the form of minute pills, containing minimum doses for frequent repetition in cases of children and adults. It is claimed by some practitioners that small doses, given at short intervals, exert a more salutary effect. Sydney Ringer, M. D., in his recent works on Therapeutics, sustains this theory in great variety of cases. 20 cents per 100.

PARVULES OF CALOMEL, 1-20.

MED. PROP.—ALTERATIVE, PURGATIVE.

Dose.—1 to 2 every hour. Two Parvules of Calomel, taken every hour until five or six doses are administered which will comprise but half a grain, produce an activity of the liver which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

PARVULES OF CALOMEL AND IPECAC.

MED. PROP.—ALTERATIVE, PURGATIVE.

Rx Calomel, 1-10 gr.
Ipecac, 1-10 gr.

Dose.—1 to 2 every hour. Two Parvules of Calomel and Ipecac, taken every hour until five or six doses are administered (which will comprise but a grain of Calomel), produce an activity of the liver, which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

PARVULES OF ALOIN, 1-10.

MED. PROP.—A MOST DESIRABLE CATHARTIC.

The most useful application of this Parvule is in periodic irregularities—Dysmenorrhœa and Amenorrhœa. They could be given in doses of one or two every evening at and about the expected time.

Dose.—4 to 6 at once. This number of Parvules, taken at any time, will be found to exert an easy, prompt, and ample Cathartic effect, unattended with nausea, and in all respects furnishing the most aperient and cathartic preparation in use. For habitual constipation, they replace when taken in single Parvules the various medicated waters, obviating the quantity required by the latter as a dose, which fills the stomach and deranges the digestive organs.

PARVULES OF PODOPHYLLIN, 1-40.

MED. PROP.—CATHARTIC, CHOLAGOGUE.

Two Parvules of Podophyllin, administered three times a day, will re-establish and regulate the peristaltic action and relieve habitual constipation, add tone to the liver, and invigorate the digestive functions.

PARVULES OF NUX VOMICA, 1-50.

(WARNER & CO.)

Nux Vomica, according to Dr. Ringer, is possessed of real curative powers for sick headache, accompanied with acute gastric catarrh, whether due to error in diet, constipation, or to no apparent cause. He regards it, administered in small and frequently repeated doses, as useful in many disturbances of the gastric functions.

SUPERIOR TO PEPSIN OF THE HOG
INGLUVIN

A Powder—Prescribed in the same manner, doses and combinations as pepsin.

A SPECIFIC FOR VOMITING IN GESTATION IN DOSES OF 10 to 20 Grains.

WILLIAM R. WARNER & CO.

PHILADELPHIA
NEW YORK
CHICAGO

LARGEST PILL FACTORY IN THE WORLD.

For sale by all druggists or sent by mail on receipt of price. Physicians' private formulæ made up in lots of 10 and over. Pills, granules or compressed form. Write for quotations.

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

MEDICAL TREATMENT.

Treatment of Lumbago and Sciatica.—Grellety has obtained very satisfactory results in the treatment of lumbago and sciatica by friction with chloral liniment. In many of his cases other methods of treatment have proven unsuccessful. The writer's method was to rub vigorously the whole of the painful area for ten minutes, night and morning, with a liniment consisting of equal parts of chloral hydrate and olive oil. The chloral before being mixed with the oil should be dissolved in the smallest possible amount of water. The mixture should be prepared fresh for each treatment.

Rheumatism Acuta Treated by Aspiration.—Zagato insists on the efficacy of the aspiration treatment of the joints in acute rheumatism. After the fluid is removed, before taking out the needle inject a syringe of two per cent. carbolic acid. Pain ceases at once and recovery follows.

Glycosuric Inadequacy.—Achard and Leeper have carried out a series of interesting investigations on the subject of transitory glycosuria. They find that sugar may appear in the urine in different degrees and at different times. These cases constitute a graduated series, having at one end diabetes mellitus, at the other a mere form of glycosuria, which is intermittent. This latter may show a considerable variation in its severity. It may appear if not present, or if present may be considerably increased by the hypodermic injection of glucose. Considerable amounts of sugar injected into healthy persons will not cause glycosuria. Rheumatism is sometimes attended with glycosuria, particularly gonorrheal rheumatism. The same thing holds true in cases of cancer and tuberculosis nearing their end.

It has been noted by S. Miotti that in pregnancy of guinea-pigs the liver becomes progressively degenerated by fat as the pregnancy goes on. This is a true degeneration of the cells and not an infiltration. It would seem that in pregnancy there is a greater production of fat; at any rate, a smaller consumption of it is unlikely, for the foetus calls for fat, especially in the latter months.

Sodium bicarbonate in the treatment of vomiting of pregnancy has proven very efficacious, two grammes being given in a capsule to overcome what has been considered the fundamental cause—*i. e.*, an overacid state.



HYDROZONE (30 vol. preserved (H₂O₂ solution.)

IS THE MOST POWERFUL ANTISEPTIC AND PUS DESTROYER.
HARMLESS STIMULANT TO HEALTHY GRANULATIONS.

GLYCOZONE (C. P. Glycerine combined with Ozone.)

THE MOST POWERFUL HEALING AGENT KNOWN.

Successfully used in: Whites, Leucorrhœa, Vaginitis, Metritis,
Endometritis, Ulceration of the Uterus, — Urethritis,
Gonorrhœa, — Cystitis, Ulcer of the Bladder, Etc.,

Send for free 300-page book "Rational Treatment of Diseases caused by Germs,"
containing reprints of 140 scientific articles by leading contributors to medical literature.

Physicians remitting 50 cents will receive one complimentary sample of each,
"Hydrozone" and "Glycozone."

Hydrozone is put up only in extra small, small, medium and large size bottles bearing a red
label, white letters, gold and blue border with my signature.

Glycozone is put up only in 4-oz., 8-oz. and 16-oz. bottles bearing a yellow label, white and
black letters, red and blue border with my signature.

Marchand's Eye Balsam

cures all inflammatory and contagious diseases of the eyes.

DISTRIBUTING AGENTS:

Thomas Christy & Co., 25 Lime St., London, Eng.

Leeming, Miles & Co., 53 St. Sulpice St., Montreal, Can.

Beckett, Zeilin & Co., 220 Sutter St., San Francisco, Cal.

E. H. Buchler, 134 Lake St., Chicago, Ill.

John W. Lehman, 428 Camp St., New Orleans, La.

PREPARED ONLY BY

Charles Marchand

Chemist and Graduate of the "Ecole Centrale des
Arts et Manufactures de Paris (France).

57-59 Prince St., New York.

SOLD BY LEADING DRUGGISTS.

AVOID IMITATIONS.

MENTION THIS PUBLICATION.

No Medicine is Required

TO CORRECT GASTRO-INTESTINAL TROUBLES IN INFANTS

WHEN **ESKAY'S** **Albumenized** **FOOD** IS USED

for besides being sterile and protected by our special package from impurities, it is so
easy of digestion that the digestive functions are taxed only to their normal extent, and
absorption and assimilation take place with ease. It is on this account as well as the
soothing effect of egg-albumen on inflamed mucous membranes, that Eskay's proves to be

The Ideal Diet in Inflammatory Diseases of the Digestive Tract

Clinical Report

"For ten days I had a little patient suffering with enterocolitis living on **ESKAY'S FOOD** alone, during which time the stools dropped from thirty-two to two in twenty-four hours, vomiting ceased, and stools showed that digestion was being performed more properly. In the course of a few days milk was added to the food and in the course of about five weeks the baby was restored to health. I have never seen such good results from any food as this."

Dr., Baltimore.

Clinical Report

"I have had the best results from the use of **ESKAY'S FOOD** in a case of gastro-enteritis. One case in particular showed no improvement whatever upon any diet until placed upon **ESKAY'S FOOD**. So far I am more than pleased with the results."

Dr., Boston.

Samples and Clinical Reports Furnished Upon Application
SMITH, KLINE & FRENCH CO., Manufacturers, Philadelphia, Pa.

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

SURGICAL SUGGESTIONS.

Prevention of Ventral Hernia Following Abdominal Section.—Eads (*Annals of Surgery*) believes that fifteen per cent. of all patients upon whom laparotomy has been performed, if examined five years or more later, will be found to be suffering from post-operative hernia. This may be prevented by the attending surgeon by careful attention to the manner of making the original incision. More attention should be paid to *making* of the incision than is commonly done: most surgeons are careless as to how they make the incision, but go into long dissertations on the closing of the wound. It is held that intact innervated muscular fiber is the only safeguard against ventral hernia. Surgeons should not cut unnecessarily nerve fibers in the abdominal wall. In performing the section, the surgeon should make his incision parallel with the motor fibers of the nerves of the abdomen. The author is in favor of a long skin incision and a blunt dissection of the muscular fibers.

Contracture of the Abdominal Muscles in Contusions.—Hartmann is of the opinion that contracture of the abdominal muscles is in favor of immediate laparotomy in cases of contusion. It is held also by Hartmann that absence of this contracture speaks against abdominal section in cases of contusion. Many cases are cited by him to support this dictum.

Intestinal Obstruction in Gall-Stones.—Sandler has reported a case of intestinal obstruction due to a large gall-stone being imbedded in the lumen of the intestine at a point eight inches above the ileo-cæcal valve.

Amputation of Both Feet Under Cocain Anesthesia.—Behle reports a case where in gangrene of both feet after an accident, in a weak and depressed patient (general anesthesia thus being contra-indicated), he amputated both feet by the use of cocain anesthesia. No bad result followed. This is a strong point in favor of the use of this agent in such cases, no bad results from the cocain having followed. Of course, this must be watched for and sometimes expected in those having an idiosyncrasy for the drug.

Proctorhapy in Prolapsus of the Rectum.—Suspension of the rectum is used as a curative measure in prolapse of the rectum. An incision is made through the left rectus muscle, the rectum caught up and pulled upon until the prolapse is overcome and the viscus held in place by fine silk sutures.

THYROID TREATMENT



IS specific in Goitre, Myxedema, Cretinism and Obesity. It has been employed in Congestion of the Pelvic Organs, Fibroid Tumors of the Uterus, Menorrhagia, Endometritis and other Gynecological and Obstetrical cases. Good results have been reported from its use in Lupus, Psoriasis, Scleroderma, Ichthyosis and other skin diseases of an intractable nature; in Rheumatic Affections and in the manifestations of Arteriosclerosis, Prostatic Enlargement, Melancholia and Mental Disorders, especially those of the adolescent, puerperal and climacteric periods.

Physicians may depend upon the Armour Thyroid Preparations in all cases as the products are made from selected fresh material, are entirely free from diluents, and are the most concentrated products of the Thyroid Gland.

Samples and literature will be forwarded on receipt of a professional card.

ARMOUR & COMPANY, CHICAGO



An American Text-Book of Diseases of the Eye, Ear, Nose and Throat. Edited by G. E. DE SCHWEINITZ, A. M., M. D., Professor of Ophthalmology in the Jefferson Medical College, Philadelphia; Consulting Ophthalmologist to the Philadelphia Policlinic; Ophthalmic Surgeon to the Philadelphia Hospital and to the Orthopedic Hospital and Infirmary for Nervous Diseases, and B. ALEX RANDALL, M. A., M. D., Ph. D., Clinical Professor of Diseases of the Ear in the University of Pennsylvania; Professor of Diseases of the Ear in the Philadelphia Policlinic; Ophthalmic and Aural Surgeon to the Methodist and Children's Hospitals, Philadelphia. Illustrated with 766 engravings, 59 of them in colors. Philadelphia: W. B. Saunders, 925 Walnut street. 1899.

We desire to inform the medical men, both student and practicing classes, of the high value of the book before us. It goes into the subjects in a thorough manner, and has, in addition to the ordinary matter of the text-book, points which have not heretofore been exhibited, namely: chapters on operative work on the eyes of animals, a full description of operative work on man, and a good chapter by the editor on the bacteriology of eye affections. Optics are fully discussed. The diseases of the ear and nose are well treated. Composed as it is by a number of collaborators, the work portrays the experiences of leaders in these specialties. It is a contribution to medical science which well deserves the success that we bespeak for it.

An American Text-Book of Gynecology, Medical and Surgical, for Practitioners and Students. By HENRY T. BYFORD, M. D., and a staff of editors. Edited by J. M. BALDY, M. D. Second edition, revised. With 341 illustrations in the text and 38 colored and half-tone plates. Philadelphia: W. B. Saunders. 1899.

We take pleasure in introducing this second edition of the work on gynecology by American authors before the profession. While it was an excellent thing even in its initial edition, still we can note marked improvement in the work as it now stands. The text-matter goes thoroughly into an exposition of the gynecologic procedures of the present day. Gynecology has made great strides here in America, and the medical profession is indeed fortunate in having the fruits of the work of the best men in this line set down in such a book as this, profusely illustrated and well gotten up. Its merit can be seen by all, and we therefore need only to mention the work to insure its attention.

The extreme caution that is necessary in the treatment of anaemia and other wasting diseases during the heat of summer is the best justification for the almost universal use of Scott's Emulsion in such cases at that period of the year.

SCOTT & BOWNE, 409 Pearl street, New York.

Diet in Typhoid Fever

SUPPORTING the strength of the typhoid patient without overloading the stomach or fatiguing the intestine demands the most careful judgment on the part of the physician. The selection of a diet which will nourish the patient without giving distress, causing elevation of the temperature, or inducing diarrhoea presents a problem heretofore difficult of solution. The question has been satisfactorily settled in

PLASMON

A SOLUBLE, PURE MILK-ALBUMIN

ODORLESS, TASTELESS, NUTRITIOUS AND INEXPENSIVE
REPLACING ANY AND ALL OTHER NITROGENOUS FOODS



The ingestion of PLASMON even in the early stages of typhoid fever will not cause any rise in temperature; it nourishes the patient without overtaxing the digestive organs, stimulates the natural appetite, and if diarrhoea exists PLASMON has a tendency to check it without producing constipation.

PLASMON furnishes the system with the most essential constituent of the human organism, Albumin, and in a soluble, extremely digestible and highly assimilable form. It can be administered alone, or in combination with any articles of food. PLASMON is not a substitute for Albumin, but IS ALBUMIN, pure and simple. *Physicians are invited to send for samples, and prove for themselves that the claims made for PLASMON as a nutrient are based upon established facts.*

The AMERICAN PLASMON SYNDICATE, Ltd.

24 ASTOR COURT ♣ ♣ ♣ ♣ ♣ ♣ NEW YORK CITY

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

NEW REMEDIES.

An Innovation in Effervescent Salts.—Every practicing physician in the South and West is more or less acquainted with effervescent salts and their advantages and disadvantages for general use, and they will all freely admit that the greatest and only drawback is their liability to deteriorate, turn yellow and not effervesce. They will also admit that if proper salts could be obtained that would keep their effervescence and granular form, that it is the best way to prescribe medicine. The human race, as a rule, especially in this part of the country, do not drink enough water to properly cleanse the system inside, which needs cleansing as well as the face and hands. By the physicians prescribing their remedies in this form, the patients get at least three or four half glasses of water into their systems a day, besides the medicinal properties which the same contains, and the carbonic gas which is thrown off by the effervescent salts coming in contact with the water, thereby killing all germs, etc., which the water may contain, besides greatly aiding in the digestion of food.

The effervescent salts manufactured by the St. Louis Granule Co. are warranted to keep forever in any climate, if kept properly corked; that is a claim which cannot be made by any other manufacturer of effervescent salts, as their goods will turn yellow and also go to powder, even in the original package, before the same has been opened.

William C. Pope, who is the manufacturer of these goods, has manufactured the same line of goods in Boston for the past twelve years, and he cheerfully refers to any physician or druggist in the New England States as to the truth of the above statement. The editor of this journal has read letters from the wholesale druggists of Boston, in which they state that in the twelve years they have handled the goods they have never had a single bottle returned.

You are cordially invited to write for samples and literature to the St. Louis Granule Co., 114 N. Broadway, St. Louis.

Tyree's Antiseptic Comp.—W. M. Gray, M. D., microscopist to the Army Medical Museum, states that the exact antiseptic strength of Tyree's pulv. antiseptic compound is one part of the powder to fifty of water. The product of Tyree's is recommended for treatment of leucorrheal and gonorrheal discharges. Information relative to this product can be secured from Mr. J. S. Tyree, chemist, Washington, D. C.

Interstate Medical Journal.

VOL. VIII., NO. 7. JULY, 1901.

Issued Monthly for One Dollar a Year.

EDITORIAL DEPARTMENT.

WARREN B. OUTTEN, M. D.,	-	-	-	} EDITORS.
WILLIAM PORTER, M. D.,	-	-	-	
R. B. H. GRADWOHL, M. D.,	-	-	-	
OTHO F. BALL, M. D.,	-	-	-	
				MANAGING EDITOR.

Address all communications, news of medical interest, subscriptions, etc., to the INTERSTATE MEDICAL JOURNAL CO., COMMERCIAL BUILDING, ST. LOUIS, MO.

SUNSTROKE.

With the onset of the semi-tropical temperature which is at present prevailing in this latitude, the practitioner may begin to have his eyes open for sunstroke. This formidable condition is always present in the district included in the Mississippi valley. It is important for us to recognize it when it occurs, and still more important to apply remedial measures for its relief. Some idea of its danger to life can be obtained from the sum of all statistics in this climate, showing that fifty per cent. mortality is what is to be looked for in the general run of cases. St. Louis in hot weather annually furnishes a goodly quota of the percentage of cases occurring in this district.

It is not always necessary that the case be subjected to the direct action of the sun's rays in order to be afflicted by thermic fever. On the contrary, in our city we often find it occurring at night-time, in individuals who have been toiling in the sun all day, and who are so much oppressed by fatigue and heat at night that their heat-regulating centers give way, giving us the condition of thermic fever. The prognosis of the cases occurring in the city is often grave, for the reason that we meet with this condition very often in laborers who, in addition to their manual labor, have been imbibing alcoholic drinks during the day. This further aggravates their susceptibility and further diminishes the chances for a *restitutio ad integrum*.

Once the diagnosis is made, treatment should be begun immediately. It seems that the best results are obtained by fighting the troubles with nature's great antipyretic agent, cold water. The temperature of these thermic fever cases is often quite high, sometimes as high as 107 and 108. They should be immersed in cold water, preferably the ice bath. Care should be taken that they are not kept too long in the ice bath. For example, keeping the patient in the ice bath until his temperature drops to normal means that it will become subnormal when he is removed from the bath. This can readily be avoided. Again, his weakening heart should be whipped up with direct stimulation by means of hypodermatic injections of strychnine. It is obviously wrong to give him further alcoholic stimulation. In those cases where we find the patient with a subnormal temperature, he should be warmed by hot water bags, etc. Too energetic treatment is ill-advised, since he may be made worse by it. An intelligent expectant treatment in addition to the above recommendations should be enacted to meet unusual and special indications.

EXTENDING AN OPERATION WITHOUT CONSENT.

A case involving the legality of a surgeon to carry out operative procedures in his work in the abdomen, without the consent of the patient, is now being discussed in Chicago. A woman was operated upon by Dr. Martin at the Post-Graduate Medical School of Chicago for the reduction of a large ventral hernia. It was found that she was suffering with tuberculosis of the appendages, not suspected before operation, and so the surgeon decided that for her best interests the ovaries should be removed. This was done, and after the patient was informed of it she instituted legal proceedings to recover from the surgeons in charge, the damages being estimated at \$25,000. The defense maintained that although there was no consent on the part of the patient, the condition of tuberculosis of the ovarian structures would have ultimately killed the patient, so that operative interference was considered justifiable—this plan of defense raising the question of the actual authority of the surgeon in meeting with unexpected conditions while operating. The case was twice tried in the Superior Court, resulting in a verdict for the defendants, the last judicial authority giving it as his opinion that although the plaintiff had not impliedly given consent to the surgeon to do whatever he thought best for her interest, he would nevertheless hold that the law would be so, should the point be properly raised. The case has been appealed. General legal opinion is to the effect that the law will allow the surgeon to do whatever he thinks is for the best interests of his patients, under similar conditions.

It is confidently to be hoped that the case will come before the Appellate Court, and that the law as so cited will be laid down. The issue is a new one and one which demands the attention of the judiciaries. It will arise soon again, and 'tis small wonder that it has not arisen before.

Certainly, the spirit of equity would lead the most severe tribunal to see that by ruling against the defendants in the foregoing case, that the surgeon is literally standing between the "devil and the deep sea"—on the one hand, the prospects of loss of life should he neglect to radically remove conditions which demand their removal and yet which he has not foreseen; on the other hand, the certainty of being held guilty of assault and battery and the damage suit it brings with it. There is no other course to be followed by the law which is compatible with justice and reason than which upholds the surgeon in such conditions.

A PARABLE.

Once upon a time, not long ago, there were certain physicians, supposed to be upright, God-fearing men, serving the sick and avoiding the appearance of evil. In the same city were pastors and teachers who were believed to teach pure doctrine, and were leaders among men.

Now it came to pass that within the fold of these pastors crept a wolf in sheep's clothing, who betrayed himself by his restlessness and hunger for blood. When the shepherds found him they cast him out.

Immediately the wolf began to make a great howl, extolling his virtues and appealing to the credulity of the sheep, many of whom were deceived by his vauntings.

After a while it came about that the wolf wanted recognition so as to get more sheep which were needed in his business. So he made himself known to the physicians of that place and asked for a character.

Now these physicians, forgetting that they knew nothing of the work of the pastors, and that they were ever the recipients of kindness from these pastors, listened to the voice of the wolf and gave him that that he desired and so enabled him to boost himself even more than aforesaid.

And the world that taketh notice of these things, wondered.

[The characters in this may be transposed and yet the parable convey both truth and accuracy.]

STATISTICS OF CANCER.

Some idea of the prevalence of cancer on the continent can be gained from the interesting note published by George Heimann, of Berlin. He says that the percentage of death from cancer in the kingdom of Bavaria has increased from the year 1890, when it was 8.1 to the 10,000 inhabitants to 10.2 to 10,000-inhabitants in 1899. This increase is partly due to the fact that more cases are being recognized now by the clinician and principally by the pathologist at autopsy than formerly. In addition, the percentage of cancer in man has increased proportionately to that in women. In man the percentage has increased at the rate of 40 per cent., in women at the rate of 34 per cent. In the year 1899 in the district of Swabia the mortality rate from cancer was 13.6 per cent., in upper Bavaria 13 per cent., in Pfalz between 7.2 and 7.5 per cent. In the

Rhenish district the mortality in the cities was 13.4, in the country 9.7 per cent. In Munich it was 14.7 per cent., in Nurmberg 13.6 per cent. The number of case which are now treated in the hospitals of Germany has considerably increased.

These figures show conclusively that cancer is increasing steadily. Should we make similar investigations in this country, the same state of affairs could probably be ascertained. It goes without saying that there is more operative interference in the case of cancer, particularly as it occurs in women, but who can say that it cuts down mortality? It is true that there is a temporary relief, but all these patients ultimately die of metastatic disturbances, referable to the original cancerous condition. Even though such bloody and protracted operations as Halsted's operation for cancer of the breast are faithfully carried out, we know that the very fact that it is expedient to go into the cervical glands to extirpate them means that extension has already taken place, that probably the pleural lymphatics are affected and metastasis extremely liable to occur. In short, we may say that we are at the rope's end in this regard: and we will remain there until more light is thrown on the etiology of the disease. We may still hope that that etiology which is correct may still be discovered, even though attempts in this direction have been hitherto attended with but scant success.

FAILURE TO REPORT SMALL-POX IN THE CITY.

Our attention is attracted to a circular letter recently issued by the efficient and wide-awake Health Commissioner of St. Louis, Dr. Max C. Starkloff, calling the physicians of the city to account for their failure to report to the Health Department cases of mild small-pox which have been treated during the past spring. It seems that there have been over two hundred cases of small-pox in this city since April 1st. These cases have been of the mild type, and but few deaths have occurred. Owing to the mildness of the type new prevalent, the disease has spread much more rapidly than it would have had the type been a severe one. In many cases the disease was discovered by the department while the patient was under treatment by a physician, yet no report was made to this effect.

The Health Commissioner very wisely insists on the reporting of such cases immediately to the department, and offers the diagnostic skill and acumen of the experts of the department in aiding the physicians of the city in their diagnoses. Attention is called to the fact that failure to report such diseases as variola, diphtheria, etc., is a misdemeanor and punishable as such.

We feel that the Health Commissioner is perfectly justified in his warning to the physicians of the city to report such cases or else be prosecuted. It is an injustice to him in the discharge of his duty that physicians do not back up his assiduous labors at safe-guarding the health of the community by co-operating with him in stamping out pestilential diseases. In case of

a severe epidemic of any disease, it is to the chief of the Health Department that the community looks for explanation. We therefore heartily endorse his action in this matter, and believe that he who neglects the timely warning so courteously given deserves full punishment. In our opinion, failure to report such a disease as small-pox is a most flagrant act of carelessness on the part of the physician, and one which should be punished by a fine sufficiently large to bring him to his senses "forever and aye."

MUSICAL SENSATIONS IN SURGICAL ANESTHESIA.

A Paris dentist, Drossner, called Laborde's attention to the fact that while his patients succumbed to the influence of an anesthetic, he had noticed that the hallucinations were invariably connected with the sounds from the street below. The auditory sensations seem intimately connected with the anesthetic sleep, and the idea occurred to him to substitute for the discordant, terrifying sounds of the street harmonious musical sounds. He arranged a musical phonograph with a receiver for each ear. As the patient took his seat, the receivers were placed in his ears, and the nitrogen gas administered while he could hear nothing but the music from the phonograph. The operation over, the patient is aroused with none of the hallucinations from the street noises, but calm and cheerful as before, saying that he heard nothing but the music.

This ingenious device is certainly a good advance on the part of the anesthetist. Not only can it be used in the case of the temporary anesthesia of nitrous oxide gas, but it can be called into action in ether and chloroform narcosis. It is a common experience that one of the most disagreeable features about the taking of an anesthetic is the dull noises heard by the patient. These can all be avoided, as Laborde mentions, by using a phonograph. Laborde pointed out to the Academy of Medicine of Paris that the general anesthesia may be begun with nitrous oxide gas, using the phonograph, and then the anesthetic state kept up with either ether or chloroform. This procedure certainly robs the patient of a most painful part of the anesthesia, and should be practiced wherever practicable. The French dentist who first advocated it is certainly a resourceful individual and deserves great credit therefor. The procedure may seem a refinement to some, but it certainly will win the gratitude of those individuals who suffer so much from the auditory hallucinations of anesthetization.

WAR ON MOSQUITOS.

Ever since the work of Manson, Ross, *et al.*, was published, the idea of the destruction of the mosquitos, the carriers of the malarial plasmodium, has been before the profession. Concerted efforts of import have not yet been made, except in an experimental way. The work of Koch on the west coast of Africa showed some good results in the wholesale destruction of the mosquito, but nothing extensive was done. The Italian authorities are preparing this year to continue some work begun by them

first in 1899. Experiments along this line for over two years have proved that railroad employes who have been protected against the bites of mosquitos have escaped the disease, malaria. The constant susceptibility of railroad employes to malaria has always crippled the transportation companies. Practically, the entire force has to be changed twice a season. The first attack on the mosquitos in the Roman Campagna was begun over two years ago by Professor Celli. He worked on two railroad lines, the Prenestina Cervara and the Ponteglara systems. He selected five cottages on the first line occupied by workmen, and three on the second line. Every known precaution to protect the inmates was adopted, with the result that in the protected cottages only four out of the twenty-four persons inhabiting them were attacked by malaria, and these four did not follow out the professor's instructions. In one cottage the inmates would not adopt any precautions, with the result that twelve out of the fourteen contracted malaria. The experiments on other lines were equally successful.

The idea first promulgated in connection with the war on mosquitos was an attempt at destruction of the mosquitos themselves; but if the work of Celli applies in all cases, it will be far easier to protect the people from the bites than by killing off the tribe of *Culex* and *Anopheles*. However much the killing off of the whole malaria-carrying mosquito families may be "a consummation devoutly to be wished," it nevertheless seems more practicable at present to follow Celli's method of warfare.

MEDICAL COLLEGES IN ST. LOUIS.

A very few years ago St. Louis was overburdened with medical colleges, and nearly every physician was a "professor"—over half a score of institutions able to grant diplomas, an average of thirty professors and as many assistants to each, and students by the wholesale.

The teaching was no better and no worse than in other cities, and the students were the average. The boards of health permitted registration after a two years' course. What with low fees, "concessions," great energy on the part of managers, and easy admission and graduation, "doctors of medicine," so-called, were turned out by the hundred, to meet (most of them) bitter disappointment and ridicule.

The action of the boards of health in requiring preliminary education and a three (and now a four) years' course, has changed all this. Moreover, the action has been wisely seconded by the colleges themselves. Students no longer matriculate "to get through." The "hurry boys" dropped out, and the graduating classes became smaller. Nor was this all. Requirements for preliminary education and graded courses produced a higher average of intelligence and better instruction.

Our medical colleges have wisely and effectually aided the State boards. Not long ago two of the leading colleges consolidated, and we have another movement in advance—the union of the Marion-Sims and

the Beaumont colleges. The Woman's College has dropped out, and there are signs of further cutting down in the list.

So it is that in a very short time St. Louis can be congratulated on not only a reduction in the number of colleges, but a decided increase in the strength and availability of those continuing. The educational era for St. Louis is but begun, and our medical colleges will not be found wanting.

RESUSCITATION FROM COLLAPSE IN CHLOROFORM NARCOSIS.

The subject of bringing back to life those individuals who succumb to chloroform or ether narcosis is an interesting one, and one withal quite important, inasmuch as this accident is liable to occur, and does occur, comparatively often. Many of us have seen patients, apparently doing well during the administration of an anesthetic, suddenly stop breathing and die, without one single tangible reason for it, so far as the anesthetist can make out. In these cases all the ordinary means of resuscitation are tried without avail. Artificial respiration, Laborde's method of rhythmic retraction of the tongue, application of the faradic current, flagellation of the chest—all these means are tried without success. In despair, the artificial respiration is kept up for hours, but only to find that the heart will not functionate again.

It is in these severe cases that we most earnestly look for something better than what we now possess in the way of resuscitation. Have we any other means? It is true that some have advocated in the extreme cases the procedure of making a puncture into the right ventricle, but this has been absolutely proven futile. In this connection anything which promises results is most interesting to the medical profession.

The latest procedure to promise results is that first advocated by Prus, described in the *Wiener klin. Wochenschrift*, 1900, Nos. 20 and 21. Prus cites some experiments which he performed on dogs which he had killed with chloroform. After failure to bring them back to life by tracheotomizing them and blowing air into the lung, he made rhythmic compression of the heart with the fingers, at the same time in some cases transfusing the animals with a salt solution into the centripetal end of the femoral artery. He began his massage of the heart in some cases one hour after death. In twenty-one cases in which he used this method he resuscitated the animals sixteen times, or a percentage of seventy-six.

Further interest is elicited in Prus' experiments by reason of the fact that he narrates a case in a man, where, one hour and three-quarters after death, the heart was exposed and massage begun; after fifteen minutes contraction of both auricles began, but ceased afterwards. In another case, reported by H. Maag, *Centralblatt fuer die gesammte Medicin*, January, 1901, the patient suddenly ceased breathing during the course of an operation. All ordinary means failed to revive him. The heart was then exposed and compression begun, with the result of making it beat again. The patient lived over twelve hours and finally died. Together with

massage of the heart, Maag practiced forcible blowing in of air into the lungs through a tracheotomy wound. In this case the pleural sac of the left side was opened in exposing the heart; also in forcibly distending the lungs the stomach and intestines were filled with air, causing the diaphragm to become rigid—a decided handicap to the stricken heart in its efforts to functionate again.

In another case reported by Aglinzeff, *Centralblatt fuer die gesammte Medicin*, No. 21, 1901, a boy suffering with a pyemic infection was operated upon, and after collapse and the failure of the ordinary means to revive him, this procedure of massage of the heart was begun. His heart began to beat again, but ceased after a half hour.

These cases are intensely interesting and lead us to believe that massage of the heart in the manner pointed out by Prus is the best procedure in extreme cases. Even though the cases reported failed to survive, it was demonstrated that the heart can be made to beat again in cases apparently dead. There were other reasons why the cases did not survive. In all of them, in exposing the heart, the pleural sac was opened and thus a handicap added to the already almost hopeless condition. In the last case, the heart was worn out by months of pyemic infection. In the first case the massage was begun after over an hour's waiting, so that not much was to be expected, yet the heart began to beat after assiduous massage. Moreover, the animal experiments demonstrated what could be done in selected cases with proper and quick means for applying the massage. In summing the whole matter up it can safely be asserted that this method of Prus' promises excellent results in dire cases and should be practiced, not forgetting the precautions which were neglected and helped to make the preceding cases failures. We look forward to news of success along this line.

ORIGINAL ARTICLES.

AN EXPERIMENTAL STUDY OF ANTIPERISTALSIS.¹

BY DR. RICHARD MUEHSAM, of Berlin, Prussia,

First Assistant to the Surgical Department of the Moabit Hospital.

THE question of whether there is such a thing as antiperistalsis of the intestinal tract is an interesting one, not only to the physiologist, but also to the clinician. The solution of this problem will throw light on the clinical observation of stercoraceous vomiting in cases of ileus, and will settle the debated question of whether there is any efficacy in the use of nourishment by way of the rectum—*i. e.*, whether food material placed there is forced upwards into the absorbent part of the gut by backward waves of muscular motion.

Englemann² has made experiments on peristalsis and antiperistalsis. The sum of his results can be found in his words: "Smooth muscle fibers can contract in peristaltic waves as well as in antiperistaltic waves." Contrary to this observation is that of van Braam Houckgeest:³ he made experimental laparotomies for the study of intestinal movements in rabbits bathed in Koch's salt solution (0.6 per cent.) at a temperature of 38° Centigrade. He came to the conclusion that there has been no observation of an antiperistaltic movement in living normal animals.

Nothnagel⁴ operated in the same way, with the additional procedure of irritating the intestinal mucosa by the injection per rectum of a concentrated (ten to twenty per cent.) Koch salt solution and by placing directly crystals of sodium chloride in the intestine. Through this irritation, he succeeded in inducing antiperistaltic waves.

Grützner⁵ further elaborated Nothnagel's experiments by working with both man and animals. He proved by direct observation that particles of horses' hair, carbon, etc., when suspended in normal salt solution and injected into the rectum found their way through the large and small intestines as far up as the stomach, which observation was proven in the case of man by finding the particles in the stomach contents. He noted, moreover, that these particles of foreign material *remained* in the rectum, if they were suspended in fluids other than the normal salt solution. He came to the conclusion that the Nothnagel experiments showed that the antiperistalsis was due to the irritation of the intestine by the sodium chloride, whereby a backward current was set up in the alimentary canal.

Christomanos⁶ further elaborated Grützner's experiments by excluding the probable sources of error which might have occurred. In other words, he contended that in Grützner's experiments the experimental animals might have licked up the foreign particles from their ejecta, and thereby might have brought them per oram into the stomach. To overcome this source of error, he tried by mechanical means to prevent the animals from licking their anal regions and from touching the ejecta. He

kept some of his animals stretched out on the vivisection table, or kept them throughout the whole course of the experiment bound in a mouse-holder, or tied off the œsophagus in some cases. His conclusions are as follows:

1. Grützner had elaborated the previous experiments of Nothnagel.
2. No observation as yet has been made of antiperistaltic movements in normal animals under normal conditions.
3. Small particles of foreign material injected into the rectum can travel but a relatively short distance upwards into the intestinal coils, for the reason that their further passage is hindered by the necessity of solution with the intestinal contents, by the peristalsis of the intestines themselves, and by reason of the contraction of the muscularis mucosæ, as stated by Grützner himself.

These experiments of Christomanos found new opposition shortly in the work of Swiesynski,⁷ who undertook to follow them up in Rigel's clinic in Giessen, with most elaborate precautions to prevent errors. He noted that Christomanos' results were referable entirely to the condition under which he brought his experimental animals.

Swienzynski did most of his operative work on dogs, injecting lycopodium in suspension into the rectum. The dogs were prevented from licking their extremities by means of muzzles made of gauze and wire netting. He came to the conclusion that lycopodium injected into the rectum of dogs or man, would travel upwards into the stomach. Whether the additional precautions of adding salt solution to the injection is necessary to produce this antiperistalsis was not brought out in his experiments, but it is probable that this addition is necessary, judging from some of his citations.

Dauber⁸ meantime conducted experiments and opposed the results of Grützner and Swiezynski in these words: "I contend that foreign particles suspended in the solutions, as narrated by Grützner, when injected into the rectum, *cannot* pass the ileo-cæcal valve."

Plantega⁹ likewise concluded, as did Dauber, that Grützner's results were incorrect. He contended that foreign particles cannot pass by the valvula Bauhini from the large intestine, and further said that the only efficacy of the normal salt solution was to promote resorption of the food material, when used for such.

After this adverse criticism, Grützner¹⁰ again undertook this work, the result of which was that he adhered to his previous statement that particles suspended in physiologic salt solution, when injected into the rectum, travel upwards; although he admitted that his first researches were not quite free from sources of error. He maintained that the same mixtures, placed in any part of the small intestines, would travel upwards as well as downwards. This is due to the pendulum-like movements of the intestinal coils. Moreover, while the Bauhini valve opposes the upward traveling of large masses, it would not oppose the passage of small

particles. Grützner, nevertheless, did not consider the question solved, but closed his article with the words: "Even though continued experiments would prove that particles are not carried up from the large intestine to the stomach, still we must ever remember the fact that, through the peculiar movements of the intestines, food particles are agitated this way and that way—namely, upwards. We must not call this an antiperistaltic movement, however, and thus add to the misunderstanding already existing."

I would also like to mention Schwarzenberg's experiments on dogs. He made fistulæ from the smaller intestines of dogs, and placed balls of lead in wax in the intestine, and noted that they traveled both upwards and downwards.

We have approached nearer to the question of the existence of antiperistaltic movements by the researches of Kirstein,¹¹ who worked with dogs in a different way than the previous investigators. He manipulated the intestinal coils of dogs in such a way that, while still attached in the mesenterium, a small part of the gut was turned on its axis 180 degrees, thus making the intestinal tract reversed for a distance. He turned around in this way 36 ccm. of the whole intestinal tract of the small intestine in dog A; and in dog B he turned 57 ccm. of the small intestinal coil of 209 ccm. The dogs were killed after periods of time ranging from seventeen weeks to three months. In the interval they had digested their food in a normal manner. At the autopsy, Kirstein found in these dogs a dilatation of the gut above and below the place of interference. Kirstein is of the opinion that a real antiperistaltic motion had taken place in that part of the gut which he had twisted. He maintains that the food was not merely forced through the reversed part of the gut, because there was a dilatation both above and below, and he had proved experimentally that forcibly injecting food into such reversed portions of the gut would not produce such a dilatation. Kirstein's conclusions are as follows:

1. The intestine possesses nervous arrangements whereby it makes its contents subject to antiperistaltic movements. (Nothnagel.)

2. The intestine never exerts this antiperistaltic motion under normal conditions. (Nothnagel.) Apparently the overcoming of anastaltic motion is due to severe conditions of innervation, the exact nature of which is not known.

3. Concentrated salt solution is a means of producing antiperistaltic motion.

4. As a physiologic way of bringing about katastaltic motion, take the experiments of Kirstein—*i. e.*, unusual direction taken by the intestinal contents. Kirstein emphasized the fact that the opposition to the usual flow in an intestine, in his experiments, was purely a dynamic one, not mechanical. They applied, however, in mechanical cases as well; for instance, in ileus.

It is my opinion that Kirstein did not take sufficiently into account in

his cases the fact that dogs have peculiarities in their digestion and have characteristics in their intestinal anatomy that must be considered. The dog has a strong intestinal musculature, and it would certainly be possible for the food to be pressed through a reversed part without a succeeding dilatation of that part. In carnivora there is a peculiarity in digestion which must not be forgotten¹²—*i. e.*, that the stomach takes more of the food to digest than the intestine. In other words, when dogs were fed on meat their intestines were never filled out with contents. In Kirstein's experiments it is possible to think that no digestion went on in the twisted gut, that the food after leaving the stomach encountered an opposition to its onward movement in the twisted gut, that it remained stationary and caused the dilatation which was remarked. Afterwards the residue was forced through the reversed part by muscular force alone. I therefore would have preferred to have heard that Kirstein performed his experiments by twisting the entire gut, and not part. To this end I performed my experiments by twisting the whole gut; but unfortunately this procedure cost me the lives of the dogs, who died of early peritonitis. One dog, however, lived long enough to enable us to solve this problem.

On November 15, 1899, I performed laparotomy on a large dog, with morphium-ether narcosis, making an incision 10 ccm. long, extending to the penis. I looked for the cæcum and had it held firmly by an assistant. Then I followed up the small intestine until I came to the duodenum, which in turn was grasped by an assistant. Then I cut into the gut in such a way that I could sew the duodenum to the central ileum and the jejunum to ileo-cæcal lumen. This was difficult because of the fact that two distinct parts of the intestines were joined, one of which had a much larger lumen than the other. This was accomplished by means of the circular suture and the interposition of a Murphy button. A twisting of the entire gut was then not necessary, the lumina having been sewn up in such a way that there was a row of sutures in the mesenteric slit and at the union of the gut margins. The abdominal wall was then sewn up with *etage* sutures, with collodion dressing. The dog stood the operation well, eating and drinking after a day or two, but vomiting meat after eating it. He ate and drank, being attacked with diarrhœa and, after heavy feeding, vomited. In order to make sure that the intestine was functioning in its new position, I injected a suspension of carbon in water into the rectum. The next day the dog ejected black stools, whereas the color of the stool formerly was yellow. After the 26th of November the dog had diarrhœa and vomited his food regularly after eating. He became emaciated and so I decided to perform laparotomy again, thinking that there was a stenosis at the upper suture. This was done on the 7th of December. I found the small intestine partly meteorically distended, partly collapsed. At the upper suture there were adhesions of the gut to other parts so that there was a knuckling of the gut. The stenosis was relieved by breaking up the adhesions, after which

the collapsed part filled with air. Two well-walled-off abscesses were found near the line of suture and were emptied. In removing the adhesions a piece of gut 10 ccm. long was cut off from its mesentery, so that another circular incision and suture had to be made. The dog did not recover from this last operation, dying on the same day.

The autopsy showed that union had taken place in both places and that the continuity of the gut was preserved. Some blood was found in the abdomen as a result of the breaking up of the adhesions. No more abscesses were found. The length of the small intestine was 485 ccm., of which 430 ccm. had been twisted, beginning at a point 55 ccm. from the pylorus. I did not find a spindle-shaped dilatation at the upper line of twisting, as described by Kirstein. Microscopic examination of the place of suture showed a good union. I have obtained beautiful pictures of the gut from the lower suturing point, where there is still to be seen a small zone of granulation tissue in the mucosa.

Through these experiments I have concluded that the gut is capable of moving its contents in antiperistaltic waves. This was proved by me not from a small piece of twisted gut, but by means of the whole gut thus treated. I believe that the vomiting in my dogs was due to the fact that by natural peristaltic waves a portion of the food was pressed back into the stomach, and, as it contained bile and pancreatic juice, it caused vomiting. I am of this impression because the vomited material was not undigested pieces of meat, etc., but yellow-brownish, gall-stained food of fluid nature.

The real muscular strength of the intestinal movements, likewise the movements of a twisted gut, was demonstrated to me by a finding in a second dog upon which I operated. This dog was subjected to the same procedure as the one described above. On the second day after the operation bloody stools were passed, and continued, with vomiting. The dog, who had taken milk and chopped meat up to this time, refused all nourishment and died on the sixth day, after repeated hemorrhages from the bowel. I found at the autopsy that the sutures held well, but that there was an intussusception about 10 ccm. long situated 10 ccm. above the lower line of suture. There were no peritonitic adhesions. The intestine was very dark, the serosa clouded. The intussusception was of this character; that part of the jejunum which had been sutured to the cæcum was invaginated into the cæcum.

Nothnagel¹⁴ differentiates between physiological and pathological intussusception. The first kind occurs without symptoms and is often found in autopsies. Pathological intussusception leads to circulatory disturbances, vomiting and bloody stools, as had been observed in the case of this dog. The dog was suffering with pathological invagination. In physiological intussusception the neck of the invagination lies towards the rectum, while in the pathological variety it lies towards the stomach. In other words, there are but few cases of pathological intussusception where the process has been an upwards one. It is a rarity.¹⁵ How, then,

did it happen that in our dog the intussusception, which was a pathological one, occurs upwards, with the neck pointing towards the cæcum? Was it an exception to the general rule? I do not believe it was, but feel sure that the condition as found by us was due to strong movements sideways of the reversed gut in its efforts at peristalsis. So we may say that the invagination in our case was a "downwards" one—*i. e.*, it would be that were the gut in the normal position. It is assuredly true that the strength of the gut is such that it can produce invagination of a part even below a contracted part, as in this case. (Nothnagel's theory.)

It is not without significance that the tetanic contraction represented by this invagination occurred in close proximity to the line of suture. I would prefer, however, not to generalize too much from this coincidence.

It is true that even though the gut is reversed, its movements go on and the food is passed on as in the normal state of affairs. This conclusion is gained from the observation of the passage of stools from the first dog, especially the staining of the stools from the carbon used.

The vomiting of the first dog during the first sixteen to eighteen days following the operation was due to natural movements of peristalsis, but that which occurred after was due to the condition of ileus which set in, owing to the adhesions. I believe that the question of antiperistalsis is solved by my experiments, inasmuch as the food was passed through the reversed gut in an antiperistaltic manner. It would have been impossible for the first dog to have lived so long, merely by having his food passed through the gut by force of distention, without independent motion on the part of the gut.

The practical point to be deduced from these experiments is that nutriment put into the rectum will surely be carried up into the intestines, where absorption will take place. This movement of food upwards from the rectum may be interpreted as due to the "pendulum" motion of Grützner's work. I can say, in conclusion, that the explanation of the ileus described may be found in the work of Leichtenstern.¹⁶ According to the mechanism of Haguenot, the vomiting of formed masses of feces is due to active intestinal movements backwards, but I think the better explanation of these cases lies in Schloffer's remark,¹⁷ when he says that these cases are often due to purely nervous influences, on the basis of hysteria, and that there is no mechanical factor and no intestinal paralysis at all concerned in their etiology. (Translated by R. B. H. G.)

LITERATURE.

1. Grenzgebiete der med. und Chir., Bd. 6, Ht. 3, 1900.
2. Beiträge zur allgemeinen Muskel- und Nervenphysiologie. Pflüger's Arch., Bd. 4, p. 33.
3. Ibid., Bd. 6, p. 266.
4. Beiträge zur Physiologie und Pathologie des Darmes. Berlin, 1884.
5. Zur Physiologie der Darmbewegung. Dtsch. med. Wochenschr., 1894, p. 897.
6. Zur Frage der Antiperistaltik. Wien. Klin. Rundsch., 1895, Nos. 12 und 13.
7. Nachprüfung der Grützner'schen Versuche über das Schicksal von Rectalinjektionen von Menschen und Thieren. Deutsche med. Wochenschr., 1895, p. 514.
8. Ueber die Wirkung von Kochsalzklystieren auf den Darm. Dtsche. med. Wochenschr., 1895, p. 543.
9. Die Theorie Grützner's über Darmbewegung bei Rectalinjektionen mit Kochsalzzusatz. Dtsche med. Wochenschr., 1899, No. 6.

10. Bemerkungen über die Bewegung des Darminhalts. Dtsche. med. Wochenschr., 1899, No. 15.
Ueber die Bewegung des Darminhalts. Pfüger's Arch., Bd. 71, 1898, p. 492.
11. Experimentelles zur Pathologie des Ileus. II. Zur Frage der Antiperistaltik. Dtsche. med. Wochenschr., 1889, p. 1000.
12. Munk, Physiologie des Menschen und der Säugethiere, 1888, pp. 127 und 156.
13. Citiert nach Munk (l. c.).
14. Die Erkrankungen des Darmes und des Peritoneum, 1868.
15. Weiss, Intussusception intestini. Centralblatt für die Grenzgebiete der Medizin und Chirurgie, 1899, No. 17 ff.
16. Der Ileus und seine Behandlung. Verhandlungen des Kongresses für innere Medizin, 1889.
17. Ueber Ileus bei Hysterie. Beiträge z. klin. Chir., Bd. 24, Heft 2.

ORAL INDICATIONS OF PHYSICAL CONDITIONS.¹

BY CARL THEODOR GRAMM, M. D., of Chicago.

THE significance of the multi-varied pathologic pictures presented by the several tissues of the oral cavity has until within recent years remained unappreciated, by both the general practitioner and the dentist. The reasons are, perhaps, that the former has not been much interested in the symptomatology of the mouth, save as he has studied its tissues in specific lesions, and has observed the tongue in gastric and febrile disturbances, and that the latter, the dentist, the oral surgeon, has been too exclusively a technician, and without concerning himself with remoter etiologic factors, has so imperfectly observed and labeled them as being "simply local" in character. Both general practitioner and specialist ought and must in the future meet on a common basis of understanding the value of the symptomatology presented in the mouth. The former will often be aided in arriving at an early and correct diagnosis of present or impending general disturbance, the latter as he approaches in learning the plateau of modern medical science will be able to intelligently treat the tissues under his especial care.

The mouth is an ever-open book, an ever-readable hygieameter to an expectant observer, because the tissues of the mouth are unique in their sensitiveness to general physical degression, since they must maintain their integrity under the most trying conditions, and because its tissues are within *ocular scope*. Thus the mucous membrane is directly exposed to irritation and infection borne by air, drink and food. Moreover, many systemic poisons are freely excreted by salivary and mucous glands of the mouth, and thus affect the membranes thereof. While the tongue and the muscles of the cheek are supposed to clear the mouth of remnants of food and the saliva flows abundantly to aid chemically and mechanically in this function, it nevertheless remains a fact, stated by high authority, that from a biological standpoint the mouth is filthier than the rectum.

We know that the periosteal membranes within the dental alveoli serve as cushions to receive the pressure of antagonizing teeth. If the

¹ Read at the Ninth Annual Meeting of the Tri-State Medical Society, April, 1901.

same continued blows that these membranes are subjected to were dealt to periosteum in any other region, inflammation and resorption would speedily ensue.

There is not another structure in the human system which in its development bears witness as frequently, as graphically and as persistently to intra- and extra-uterine malconditions as does the enamel, and no other structure is so frequently attacked and destroyed.

At no point save within a few foramina, are nerve fibers so likely to be compressed and angered by engorged blood vessels as within the pulp canals of teeth, and but few structures yield life to so mild irritants as does the pulp. No wonder, then, that hygienic disturbances should post their warnings in the oral cavity, and often, too, before their manifestations have become seriously marked elsewhere.

Before there are noticeable rheumatic twinges, the peridental membrane responds to the excess of uric or lactic acid; there are repeated periods when the teeth "feel sore." Alimentary disturbances immediately and visibly affect the mucous glands and membranes. Periodically hypersensitive teeth are direct witnesses to lessened nerve force, and auto-intoxication registers pronounced complaint by causing the gums to become congested. Busy men and women are not in the habit of noting passing slight subjective symptoms and attributing to them their proper and deeper significance. For instance, rheumatic twinges are often ascribed to the weather and soon forgotten. Gastric and intestinal disorders must have become severe before consciousness of them is awakened. Dull headaches and enervation do not startlingly suggest auto-intoxication. These symptoms are all ascribed to minor affections, but little attention is paid to them, and in the mind of the busy individual they are recognized in a but remote semi-conscious way. Thus the family physician may never become aware of the serious inroads insinuatingly but certainly made upon the longevity of his patients.

To the observer of the oral cavity, however, the story is fully and plainly written. There are striking manifestations often premonitory within the mouth that are essentially typical of their respective diseases. The well-known diagnostic spots of measles on the buccal and labial mucous membranes; Koplik's spots, are of this order. Melanosis of the same tissues, one of the typical signs of Addison's disease, and Leukoplakia oris, a manifestation in advanced phthisis, and often a forerunner of carcinoma. The hypertrophy of the papillæ with marked desquamation of epithelium, known as strawberry tongue of scarlet fever, and the characteristic mouth symptoms in scorbutis and purpura hemorrhagica and of diabetes mellitus (aphthous patches loose) have been too well studied to need elaboration here.

Leukæmic stomatitis may not be considered an accidental complication, but a symptom developed prior to the swelling of lymphatic glands and enlargement of the spleen in leukemia.

The appearance of this form of stomatitis is varied. It may assume the type of scorbutic inflammation, and suddenly disappear (Westphal). It is just this circumstance which presents itself as a typical diagnostic sign. In lichen oris the efflorescences upon the mucous membranes are often the primary foci of the lesion, and announce in advance the skin disease to follow. (Crocker, Thieberge, Marx.)

Upon anatomical grounds alone it may be judged that the mucous membranes of the mouth are susceptible to herpes, lupus, pemphigus and urticaria—in fact, to nearly all skin diseases, and that in many instances the disease has within the mouth its first manifestations.

I will not dwell upon those general lesions and symptoms in which the tissues of the mouth play so important a rôle, and often furnish differentiating features toward a direct diagnosis, to-wit: the landmarks of syphilis inherited or acquired; the pus from the margins of the gum in metastatic gonorrhœa; the manifold aspects of the tongue—that is, its shape, whether bulky as in hydrargirism, shrunken as in atony of digestion, pointed as in irritation of the alimentary canal; or its color, whether white as in anemia, or florid as in gastric inflammation, or livid as in prostration; or the significance of its temperature, or its varied coatings denoting possibly thereby biliousness, the typhoid condition, prostration, or blood poisoning.

There are three morbid conditions which I would commend to the attentive observation of, and systemic treatment by, the general practitioner. For in each of these lesions local treatment alone by the dentist is of no permanent avail.

The first is that form of chronic congestion of the free margins of the gingival followed by parallel white lines of decalcification of the corresponding teeth. These seats of decalcification at a later period become those of hypersensitive dentine and caries.

I have never known this malcondition to permanently yield to any local treatment. Cauterization of the gum margins with silver nitrate yields favorable results, but without constitutional treatment these results are but temporary. I believe the underlying morbid features are those of faulty intestinal digestion and an established acid dyscrasia.

The second morbid condition to which I refer is that of *persistent* caries of the teeth. I know of no diagnostic sign in the mouth that stands forth as such a prominent and oftentimes solitary witness to altered metabolism of human system. I wish to emphasize that I do not refer to ordinary caries of the mouth, but to that type called *persistent* caries. That type observed in pregnant women, for instance, where skill of the dentist avails naught. General softening, crumbling and breaking away of the teeth occurs. I have seen great havoc wrought in girls between the ages of twelve to fifteen, and in one case of pregnancy I have seen a beautiful set of teeth crumble away within the period of five weeks. General prophylactic treatment is here indicated, and to institute such would seem again the duty of the general practitioner.

Lastly, I approach that neuro-atrophic condition, sometimes characterized by much infection and inflammation, called Riggs' disease. The medical profession has paid but little attention to it as a disease or a symptom. I wish to give it as my experience that this lesion, of which there are several forms, is not a local disease alone, but also a symptom, and that a pleading one, of obscure, morbid, general conditions.

Each patient with Riggs' disease, or pyorrhea alveolaris, etc., etc., needs to have a thorough physical examination made. Such examinations have led to discovery of unsuspected cases of incipient diabetes. For that matter, all nutritive disturbances are prone to betray themselves in the irritation of the dental periosteal tissues.

May I not commend to your earnest attention, therefore, the fact that the mouth is of vital importance to the diagnostician. That several lesions there, lesions of great interest, such as the latter three mentioned, have their etiology yet unascertained and offer a rich field for investigation.

103 State street.

CLINICAL OBSERVATIONS REGARDING THE ACTION OF QUININE EOSOLATE IN MALARIA.¹

BY A. G. CIPRIANI, M. D., of Cagliari, Mendas, Italy.

THE application of quinine compounds in malaria leads to such prompt success that all other medicines are regarded as superfluous.

But in spite of the preferences which these preparations have over all other specific remedies, they nevertheless possess some disadvantages, such as producing intoxicating effects after large doses, and not infrequently do disturbances arise after the administration of small doses.

Regarding the various nervous symptoms to be mentioned are cinchonism; partial or total deafness, which may at times be either temporary or permanent; rashes, accompanied by edema, pruritus and finally desquamation. These are all disturbances which may be caused by the administration of even small doses.

Modern chemistry has given us various compounds, such as phenocoll, analgen, chinopyrin and euchinin, which, while they are free from the above mentioned disadvantages of quinine, are hardly more preferable.

The researches of Hering showed that the antipyretic action of phenocoll did not differ much from that of antipyrine and phenacetine, but it was Prof. Albertoni who first called general attention to its pronounced specific action in malaria. Kavig used it in the latter part of 1896 in tertian fever and came to the conclusion that even in mild cases, which quinine would have promptly checked, phenocoll even in large doses and long-continued use exerted only a very mild antipyretic action, but did

¹ Translated for INTERSTATE MEDICAL JOURNAL.

not reduce the number of parasites. He also used in a case of "quartana," analgen in doses of from 0.5–1.5 gm., but obtained absolutely negative results. The parasites not only failed to be reduced in numbers, but remained unchanged up to the twentieth attack. He then resorted to the use of quinine.

Laveran prescribed in the "Hospital di Vale de Grace:"

R Quinine hydrochlorate.....	3.0 gm.
Antipyrine	2.0 gm.
Aqua destil.....	6.0 gm.

which, on account of its easy solubility, was generally commended. This mixture, however, presented disadvantages from an œsophagus and nose standpoint; produced swellings in the facial skin, and the idiosyncrasies of some persons against this combination was so marked as to compel its disuse. Besides this, the subcutaneous application of this remedy, called "chinopyrine," always caused pain at the injection point, which would last for about one week.

Von Noorden first introduced euchinin into therapeutics, and it was afterward used by many practitioners in the various forms of malaria in somewhat larger doses than quinine. Many consider euchinin as being superior to quinine, and I also observed in numerous cases in which I used it that it did possess advantages over quinine. The euchinin lengthened the afebrile period, but in severe cases it would hardly answer to suppress the infection. Besides the preparations already mentioned, many other so-called antimalarial compounds have been put upon the market, only to disappear in a short time.

The eosolate of quinine being at my disposal, it remained for me to see whether this preparation possessed advantages over the other quinine salts. The results of the clinical trials proved satisfactory beyond all expectations, inasmuch as it combated successfully where the quinine had formerly caused functional disturbances, or was perhaps not borne at all.

The importance of this, my publication, will be even more apparent when we bear in mind that I discarded all cases of a mild form and selected only such cases as had failed to show any improvements, or only a partial improvement, while under treatment with the other quinine preparations. The eleven cases which I enumerate may be classified as follows: First, subcontinual fever; second, intermittent; third, tertian; fourth, quartan.

CASE 1.—Woman, aged twenty-nine. Subcontinual since beginning (September). Temperature up to 104° F. Chill. Spleen tumor. Quinine for ten days. Four days analgen without success. On September 18th, 1.0 gm. quinine eosolate in three doses. Next day the same. Temperature reduced. Cured.

CASE 2.—Young man, aged nineteen. Suffering with malaria since May. Febris subcontinual. Was treated until August with the general remedies without success. From September 1st to September 7th, in-

clusive, administered 6.0 gm. quinine eosolate. Daily 1.0 gm. Temperature reduced. Cured.

CASE 3.—Man, thirty-two years old. Febris quotidiana. Until now treated with quinine, phenocoll, euchinin and chinopyrine. After taking six days' treatment with quinine eosolate, he was cured.

CASE 4.—Girl, aged five years. Quotidiana. Gave euchinin fifteen days. The attacks became less severe, but did not disappear entirely. The spleen tumor remained. After seven days' treatment with quinine eosolate, daily dose 0.5 gm., a cure was effected.

CASE 5.—Boy, aged four years. Quotidiana. After unsuccessful treatment with quinine sulphate and euchinin, was given daily 0.4 gm. quinine eosolate for nine days, when a cure was effected.

CASE 6.—Man, aged thirty. Quotidiana. Very large spleen tumor. Was treated daily with 1.0 gm. quinine eosolate for eight days, when fever disappeared. The spleen was hardly palpable.

CASE 7.—Man, aged twenty-three. Suffered with malaria for two months. Tertian type. Took and repeated analgen without success. The smallest doses of quinine produced functional disturbances, whereas daily dose of 0.75 gm. quinine eosolate was administered without causing any disturbances, and effecting a cure within twelve days.

CASE 8.—Man, aged fifty years. Tertian. The first attacks began in September. From October 1st I commenced daily treatment with 1.0 gm. quinine eosolate. After three days fever was entirely gone.

CASE 9.—Man, aged forty years. Quartana. Taken sick August 25th. Tried various quinine preparations without success. From October 10th administered in twelve days 8.0 gm. quinine eosolate. Cured.

CASE 10.—Man, thirty years. Taken sick beginning of August. Very severe neuralgic pains. Tried electricity, massage, potassium iodide. Quinine was not well borne by the system, therefore gave quinine eosolate. For the following two days in 0.5 gm. doses, and later 0.75 gm. doses. After ten days' treatment the rheumatic pains had entirely disappeared.

CASE 11.—Farmer. Had attacks of fever since beginning of May without treatment. From the beginning of September he complained of drowsiness and rheumatic pains. Antirheumatics, bromides, iodides, massage and electricity without success. Quinine acted, but was not well borne, as the smallest doses produced deafness. I then began administering quinine eosolate, first in 0.25 gm. daily doses, then 0.75 gm. This was taken by him without causing the least disturbances. After ten days' treatment he was entirely cured.

From these observations it will be seen that quinine eosolate is indicated in all the various forms of malaria; and as it is perfectly harmless even if used for any length of time, it is therefore to be preferred to all the other quinine salts. As an analgesic and sedative it is also useful in the treatment of the nervous disorders attendant upon malaria. It frees the

sensorium, and leads to a state of health that is obtained from no other remedy. Appetite soon returns, and the duration of the disease is cut short.

In complicated forms of malaria it is preferable to all other quinine preparations, owing to its analgesic action and since it leaves no unpleasant after-effects. Under its action the spleen tumor disappears entirely in recent and mild cases; in severe and chronic cases it is greatly reduced. Just as other quinine salts, it develops its full action only after several hours. Notwithstanding its sparing solubility it is well borne by the system, and produces neither nausea nor vomiting.

Its bitterness increases the flow of saliva, as well as the gastric juice, and checks fermentation in the stomach. For this reason it assists the digestion of starch and albuminates, thus releasing them from the system during the period of disturbed digestion caused by the fever. Its secretory and anti-fermentative action is also produced in the intestines, notwithstanding what it may have more or less in common with other quinine preparations. It has the advantages, however, over these preparations, in that it prevents entirely the cerebral phenomenæ (somnolence cinchonism) and respiratory and circulatory disturbances.

To sum up, I may say that quinine eosolate is perfectly harmless, and while possessing all the specific actions of quinine, is entirely free from all its disadvantages. Therefore I consider it a valuable acquisition to therapeutics, and would heartily indorse its use in all the various forms of malaria.

HYDRAGOGIN IN DROPSY.

By E. TUTSCHULTE, M. D., of Newark, New Jersey,
Home Physician German Hospital.

HYDRAGOGIN is a pharmaceutical preparation presented to the last German Congress for Internal Medicine by Dr. Goldberg, of Berlin, who warmly commended the remedy, basing his statements on a clinical experience extending over a number of years.

This preparation was first brought to my notice about one year ago, and the writer decided to give it a trial as a therapeutic agent in dropsical conditions, all forms being included, whether the etiology was cardiac, pulmonary or renal, or dependent upon obstruction to the normal flow of the blood and lymph through the vessels and tissues, arising from various other causes. Theoretically, this remedy must be assumed to act as a diuretic as well as a cardiac tonic, since it contains both digitalis and strophanthus; fifteen drops of hydragogin contain about one and one-half minims tincture digitalis, two and one-half minims tincture strophanthus, also scillipicrin and scillitoxin, which are the active principles of *scilla maritima*. Besides

these there is present, probably as its most efficient ingredient, oxysaponin, an extract from *herniaria glabra*, which occurs as a gray amorphous powder with a pungent, irritating odor. Thus far but little is known of this substance, and more extensive investigations into its properties and physiological action would certainly prove interesting and possibly may lead to a still more efficient use of the drug. The dose of hydragogin is five to fifteen drops given every two hours and oftener. When necessary, it should be pushed until its full physiological effects are evident. Its administration should then be stopped entirely for a brief period, and treatment then resumed with small doses at long intervals, say five to ten gtt. t. i. d.

I have used this remedy in the past year on about ten patients, that having been the total number of appropriate cases which has come under my observation. Commencing with a small dose, five gtt. every two hours, this was increased gradually until the patient was getting fifteen gtt. every two hours, without obtaining any disagreeable symptoms, such as headache, nausea and vomiting. In only one case a patient complained of being slightly nauseated, but after ceasing its administration for six hours, I was enabled afterwards to again give the drug the same way without any return of such overaction. With the exception of three cases, very satisfactory results were obtained. I wish to state that all, or mostly all, of the older remedies of any use in these conditions were tried beforehand, but with little or no results.

The first of my series of cases was a woman, Mrs. M. T., forty years of age, who states in her previous history that within a radius of fourteen years she had four attacks of acute articular rheumatism. She was admitted to the hospital on July 30, 1900, complaining of intense headache, dizziness and dyspnoea; temperature on admission was 100.6° F. (rectal), pulse 90, and respiration 32. Physical examination showed both lower limbs enormously oedematous, and abdomen distended with fluid (ascites). Examination of heart showed that organ to be at fault. It was markedly enlarged, being in a state of acute cardiac dilatation with murmurs at both apex and base, as a result of chronic endocarditis. Urine was examined from time to time and found to be normal. Patient had been voiding very little urine in the last week, about nineteen ounces in twenty-four hours. She was immediately put on diuretics and salines, such as the salts of potash and infusion digitalis, Rochelle salts and calomel. This treatment was continued for four days, but with very little result. I did not think it advisable to use the hot air baths to cause diaphoresis, on account of the weak condition of the heart. The patient was then put on hydragogin, beginning with five-drop doses every two hours for six doses; then, as patient stood it very well, this was increased to ten gtt. every two hours. In the first twenty-four hours after using hydragogin, the patient's general condition was somewhat improved. The amount of urine passed was thirty-one ounces. All next day and through

the night I kept on with this method, and was very much relieved to see that in the next twenty-four hours the total urine passed was one hundred and two ounces, and that the patient was improving markedly. The œdema in face had disappeared and had diminished in the lower extremities, the heart's action was getting stronger, and patient was breathing easier and had little or no headache. In fact, the patient was improving so much under this treatment that all thought of ultimate tapping was discarded. In five days after using this remedy, the fluid in abdomen and œdema of the extremities had practically disappeared and she was voiding from seventy to one hundred and five ounces of urine in twenty-four hours. I need hardly say that she made a good convalescence, and in four weeks was able to get about.

Again, in another case of different causation, I was induced on account of the good results obtained in the above instance to try it. This patient was a man, C. O., forty-three years old, a brewer by occupation, with a history of being a heavy beer and whisky drinker. He was admitted September 5th suffering from acute parenchymatous nephritis. He complained of dyspnœa and intense headache, and was unable to walk on account of the swollen condition of the lower extremities. He was passing about twenty-four ounces, sometimes as low as eleven ounces of urine in twenty-four hours. Urine examined and all evidences of acute nephritis found present. Heart, lungs and liver normal. He was at once put on infusion digitalis with acetate of potash every three hours, also calomel and salines, and after forty-eight hours there was no improvement, so I resorted to the use of hydragogin, giving it the same as in the other case, and the patient began to improve at once, so that at the end of two weeks the albumen, casts and œdema had all disappeared and I allowed him to sit up in a chair. In five weeks' time the patient was discharged. The diet I have been accustomed to give in these cases consisted of milk and water, and oatmeal gruel; nothing else. In the three cases with no apparent results, I had tried nearly all the remedies indicated and also hydragogin. These cases were an old-standing atrophic cirrhosis of the liver and two carcinomata, one of the liver and one of the omentum. These three cases died eventually, but the other cases all made good improvement under its use.

In conclusion, I wish to state that in my experience hydragogin has proved itself a most pronounced diuretic, prompt in its action, but without gastric or other disturbances. The preparation certainly deserves further trial and study.



SCIENTIFIC MISCELLANY

An Explanation of the Function of the Pineal Body.—The pineal body (sometimes called a gland) now named the epiphysis was regarded by Descartes as the seat of the soul. Descartes, however, has been dead for about three hundred years, and our ideas concerning the soul have changed very considerably. The pineal body has recently been discovered to be a developmental remnant of a third eye, the elements of which have been distinctly traced in the New Zealand reptile, the sphenodon (or hatteria) by Mr. Baldwin Spencer. This pineal body occurs in all vertebrates, except the very lowest. In the hatteria it reaches the skin on the top of the head, and retains distinct traces of an eye-like formation—for instance, a complex retina. As the same vestigial hint of eye-structure has now been observed in several lizards, many naturalists are convinced that the pineal body in all animals is, in reality, the remnant of a parietal eye—an upward-looking sense-organ.

The Neglect of the Doctrine of Heredity by Teachers.—Professor Smedley, of Chicago, has investigated the height, weight, vital capacity, nervous energy and strength of some seven thousand children in public schools. His conclusion, as reported, follows: "The whole physical, mental and moral future of children depends upon their training during the early adolescent period. It is then they show the greatest aptitude for learning. With the departure of the plastic period their characters have been formed."

From the first part of this opinion, one would suppose that heredity plays no part in "the physical, mental or moral future of children," and that all of us are born with equal mental—and physical—capacity. Oliver Wendell Holmes must have been mistaken when, in referring to certain defects, he said: "The doctor should have been called in a hundred years ago." Huxley, in attaching so much importance to heredity and in insisting that all men are not born with equal mental powers, must have been talking upon a subject of which he had no knowledge. It seems strange that the leaders of scientific opinion consider heredity a paramount factor in man's physical make-up, while many teachers ignore it altogether. To anybody who uses his eyes, the truth of the doctrine of evolution in general, and of the hereditary character of almost all congenital variations, is proved every day. Assuming that Mr. Smedley has

been correctly reported, he must be singularly unfamiliar with biological science, for the evidence that the mental equipment of a child begins before its birth is overwhelming.

The Injurious Substances in Whisky and Tobacco.—According to the *Lancet*, it has been shown that “comparatively speaking at any rate, fusel oil is not the injurious constituent of whisky. It is rather the aldehydes, the partly oxidized alcohols in whisky, which are mischievous, and the chief among them is furfural. Old matured whisky is free from furfural, while freshly made or unmatured spirit contains a marked amount of this constituent, the source of the throbbing headache of the heavy drinker.” It is very doubtful whether this piece of information adds anything to our knowledge. Ethyl alcohol, when taken in anything but quite small quantity, is injurious to mankind. This much is known for certain. The more alcohol the liquid contains, the more serious are the results of drinking it. The amount of aldehydes, fusel oil or ethers contained in the various drinks is of little moment, as compared with the percentage of ethyl alcohol. No physiologist has ever told us that “old matured whisky” will not make a man drunk!

The *Lancet* also states that the amount of nicotine in Virginia tobacco does not often exceed one per cent., and that much of this is destroyed by the combustion. But new products are formed, consisting of tobacco tar oils, which are poisonous. “The composition of these oils indicates that they are very closely related to nicotine, and their chief constituent is pyridine, and it and its ‘relatives’ are responsible for the violent headache, trembling and giddiness following excessive smoking. The degree of toxicity of the smoke, however, probably depends largely upon the completeness of the combustion.”

The *Lancet* eventually arrives at the conclusion that the cigarette is the least injurious form of smoking, that the pipe comes next, that the cigar is the most injurious of all.

Liberty for Lunatics.—In the French *Journal des Debats*, Dr. Toulouse, a well-known alienist, writes in favor of liberty for lunatics, on the same terms as for mentally sound persons. The great argument for locking up lunatics is that unless they are put out of the way of mischief, they will commit actions that would be considered crimes if committed by sound-minded persons. Dr. Toulouse believes that lunatics, if free, would not supply a larger percentage of mischief-doers than other classes of the population. “If a lunatic is suffering from certain kinds of derangement, he will very soon break the law. Then it will be lawful to lock him up, but if he escapes all the pitfalls of our civilization, why rob him of his citizen’s rights?” asks the French alienist. The answer is that harmless lunatics and feeble-minded individuals are at large all over the United States; but the policy of locking the door after the horse has

been stolen—of depriving the insane of their liberty when they have done some injury to the community—is not consistent with ordinary principles of justice to the majority of the people.

Life Insurance and Drinking.—The newspapers of Philadelphia have lately printed the following statement, which is said to be a rule promulgated by Dr. George Willard, the medical director of the Metropolitan Insurance Company: "Accept the habitual drinker and those whose work is such that alcohol alone can replenish the drains on the system. Reject the periodical drinker, the man whose system is demoralized by occasional spree."

It is difficult to believe that any physician ever said this, but it is still more difficult to believe that Dr. Willard asserted that "to certain classes of men whisky is a necessary food." Apart from any question of whether alcoholic drinks are foods or not, the eminent English neurologist and surgeon, Victor Horsley, has recently shown that even moderate drinking is probably injurious to most individuals. His lecture may be found in the *Lancet* of May 5, 1900, p. 1271. In the light of modern investigation, it is not correct to say that any man in ordinary health needs whisky as "a necessary food." A man who requires stimulants every day is very sick, and a very bad risk for an insurance company. Any one contemplating the purchase of life insurance should carefully avoid any company which insures persons who drink more than four glasses of beer—or its alcoholic equivalent—every day. The ordinary American lager beer contains between three and four per cent. of ethyl alcohol.

Dr. Willard should hasten to explain or to repudiate the statements attributed to him by the Philadelphia *North American* and other newspapers. That he proposes to insure men as desirable risks who take half a dozen "drinks" of whisky each day is incredible.

A Carnivorous Parrot.—With one exception, all parrots are vegetarians. This exception is the strange New Zealand lory, the kea, which alone among its kind has developed the habit of eating flesh. From a psychological point of view the case is interesting, because it is the best recorded instance of the growth of a new and complex instinct under the eyes of human observers. The kea, before the arrival of the white man in New Zealand, was a mild-mannered fruit-eating or honey-sucking bird. But as soon as sheep-stations were established, these degenerate parrots began to acquire a taste for raw mutton. At first they ate only the offal that was thrown out of the slaughter houses, picking the bones as clean of meat as a dog or a jackal. But in course of time, as the taste for blood grew, a new and debased idea entered their heads. If dead sheep are good food, are not living ones? The keas answered this question in the affirmative, and proceeding to act upon their conviction they invented a truly

hideous mode of operation. A weak member of a flock of sheep is attacked, usually by a number of birds, and almost always after dark, the poor animal being worried to death by the combined efforts of the parrots, some of whom perch themselves upon its back and tear open the flesh, their efforts being to reach the kidneys, which they devour at the earliest possible moment. As many as two hundred ewes are said to have been killed during one night upon a single sheep "station." Of course the New Zealand farmer resents the attacks of the keas, and as the result an attempt is being made to exterminate these carnivorous birds, and the probability is that their existence will be limited to a few years.

A New Food Made from Milk.—Plasmon is a new creamery product, and is made both in Germany and in England from milk after the butter has been extracted. The name is taken from a Greek word, meaning "that which gives form." The fresh milk as it comes from the cow is put into a separator, all the cream being removed by this method. The separated milk is afterwards treated so as to coagulate all the proteids; and this coagulated mass is then kneaded and dried at a temperature of seventy degrees Centigrade under an atmosphere of carbon dioxide. When perfectly free from moisture, the plasmon is completely soluble in hot water.

Concerning the food value of this new product, it is claimed that one ounce of the powder is equal to three and a quarter pounds of the finest beefsteak! This means that it will take the place of between eleven and twelve pints of milk. The German government is using it in both the army and navy, and the department for the investigation of food for the troops has praised it highly as a portable and concentrated nutrient.

A New Theory of Longevity.—A new theory of longevity has lately made its appearance. "A man has a definite number of waking hours allotted to him," says the originator of the most recent idea, "and the fewer he uses up the longer will his life last. If, therefore, he is content to sleep for most of his days, there is no reason why he should not live for two hundred years." He adduces the case of the negroes as an illustration. The chances are that the only truth in this theory is the well-recognized fact that less than eight hours sleep is not sufficient for most mortals, and that those who habitually take less shorten their lives by so doing. But even if this novel elixir of life were what it claims to be, one may doubt whether the prescribed existence would be worth living. To our mind, the allotted three-score and ten years, without excessive sleep, would be preferable.

A Minnesota Giant.—According to good authority the biggest living man (in stature) is Lewis Wilkins, who is now in Europe. He was born on a farm near St. Paul, Minnesota, in 1874. When only ten years old he measured six feet in height, and now has grown to the tremendous

height of one hundred and seven and one-quarter inches—three-quarters of an inch less than nine feet—and weighs three hundred and sixty-four pounds. No information is given as to his general characteristics, mental or physical, but we hope to obtain these, and to return to the question of gigantism at some future time.

Leprosy Increasing in France.—Leprosy was scarcely known in France twenty years ago. It is now very prevalent in Brittany and Savoy, which, according to a recent report made by Dr. Besmier, of the Academie de Medicine, are now recognized leprosy centers.

An Instrument for Predicting the Weather.—A novel method of predicting the weather has been discovered by Professor A. Tomasina, a French *savant*. He uses for this purpose an instrument which he calls an "electrical radiophone." By means of it he can ascertain the exact nature of the electrical currents in the air at any moment, as the apparatus is fitted with a clock-work arrangement, which registers the precise quality of each current. There are also several bells in the instrument, each of which is affected by a particular current. If this is strong, the bell gives a loud ring; if it is weak, only a slight tinkling is heard. Professor Tomasina claims that his invention will be found of great service at sea, because it will prove a reliable guide to weather conditions. The present method of forecasting the weather on the ocean is of little use, except when the ship is near the shore.

Brunettes More Susceptible than Blondes to Malaria.—It is a curious incidence that brunettes are known to be more prone to attacks of malaria than blondes. This has been frequently noted by practitioners of our Southern States, who are probably more conversant with malaria in its protean manifestations than any other class of medical men in the world. In explanation of this, some have offered the theory that brunettes are more frequently attacked by the plasmodium malarie than blondes because their blood offers to the rapacious parasite more "nourishment" than that of blondes, by virtue of the increased hemoglobin of the blood. How far this theory agrees with fact, it is difficult to state. No complete statistics are at hand on this subject as to whether the blood of brunettes really contains more hemoglobin than that of blondes. We know, of course, that there is an excess of pigment cells in the epithelial surface of brunettes over that of blondes, but whether this excess of pigmentation goes with excess or hemoglobin has not yet been corroborated by scientific research. Until this research is at hand, we must accept this observation of the preponderance of malarial infection in brunettes as a clinical fact but without physiological explanation.

VIENNA LETTER.

The courses in the university are over, and all the scientific bodies have adjourned for the summer. The K. K. Gesellschaft der Aerzte held its last meeting on June 7th. A most interesting series of experiments was reported by Docent Dr. Emmerich Ullmann. He undertook to make transplantations of different parts of the intestinal tract—*i. e.*, he took young pigs, laparotomized them, dissected off flaps of the large and small intestine and stomach, leaving, however, the small tongue-shaped end of the flap *in situ*, and sewed the flaps into the gut in such a manner that they remained in continuity in their original situation. In other words, a flap from the large intestine, even when transplanted into the small intestine, was still in continuity at one end to the large intestinal mucosa. And so the flaps were transplanted from the large intestine into the stomach, from the stomach into the large intestine, etc. The animals were killed at varying periods—at the latest three months after operation. It was found that in all cases the transplanted flaps had united in their new positions. However, the flaps which had been transplanted into the stomach had shrunk to one-fourth their original size, and showed ulceration in all cases. The result of this series of experiments is rather discouraging, in view of the fact that the practical utility of such a procedure in man would come especially from the transplantation of intestinal flaps into the stomach, but the ulceration as seen in these animal experiments might be expected to occur in man as well. However, these experiments serve to dispel the erroneous doctrine hitherto in vogue, that each part of the intestine is endowed with a certain power of protecting itself against self-digestion.

Another interesting paper was that read by Dr. Gabriel Nobel on the Pathology of Syphilitic Conditions of Extra-Parenchymatous Lymph Vessels. He found that in cases of lymphangitis dorsalis penis and syphilitic sclerosis of the lymphatics the point of origin lies in the superficial lymph ducts. They show a characteristic proliferation of their intima leading to obliteration, accompanied by infiltration of the adventitia. The larger blood vessels are never involved in the formation of syphilitic cords. The author found the bacillus of Ducrey, the supposed specific cause of syphilis, in the exudate which covered the intima of the lymphatics.

The Obstetrical and Gynecological Society adjourned on the 18th of June. There was a demonstration of placenta, ruptured ectopic pregnancy tubes and a fibroma of the abdominal walls. But of more importance than the chronicle of medical society adjournments is the recent appearance of an atlas upon the Topography of the Ureters in the Female, published by Braumueller, of Vienna. There are some thirty-two excellent chromo-lithographic reproductions of this region, which is of so much

importance to the gynecologist, together with an excellent text description of the same. Both the normal and the pathological conditions of the ureter are considered. The authors of this atlas, Tandler and Halban, deserve great credit for their work, which meets a long-felt want.

I should like to state that here in Vienna, especially in the clinic of Professor Schauta, the paravaginal incision for extirpation of the carcinomatous uterus is being employed. It was first advocated by Schuchardt in 1894. This method of total extirpation of the uterus per vaginam gives an excellent opportunity both to freely expose and to extirpate the parametrial tissues.

The statistics given by Schuchardt at the last Congress of the German Society of Obstetrics and Gynecology at Giessen in 1901 are impressive, and lead us to think that this operation has a good field of usefulness and will not soon die out. This operation bids fair to do away with the usual routine method of total vaginal hysterectomy, and even compares favorably with the radical abdominal operations, such as that advocated by Ries or that performed here in Vienna by Wertheim.

Vienna, June 19, 1901.

DOCENT DR. JULIUS NEUMANN.

Shall We Give Quinine in Malarial Hemoglobinuria?—This mooted question is discussed both *pro* and *con* by our medical brethren. It is a significant fact, however, that the practitioners of this country are almost a unit in declaring that quinine is not only not indicated in malarial hemoglobinuria, but is positively dangerous to the patient. A few years ago Dr. Bransford Lewis, of St. Louis, undertook to collect all the reported cases of malarial hemoglobinuria occurring in this country, and found that the consensus of opinion is that in all cases where quinine was used in malarial hemoglobinuria, *the patient died*, but that in all cases where other measures were used, the patients usually recovered. On the other hand, the reports that come to us from India, where this condition is called "black-water fever," show that the medical authorities there use quinine, and successfully, too. It may be that the climatic conditions make the difference thus noted. However, it is expedient for us, living here in America, to follow the experience of those among us and not to use quinine in the hemoglobinuria of malarial nature. Confronted with a case of this kind, the practitioner should bend his energies to use strictly an eliminative treatment: kidneys, skin, bowels and all secretions should be encouraged to throw out the toxic products which have been retained. With such an eliminative course, and with a tonic course afterwards of arsenic, iron and nux vomica, the efforts of the practitioner will be crowned with success.

MEDICAL AND SURGICAL PROGRESS.

In future issues of the INTERSTATE will appear reports on Medicine, Surgery and the different specialties. Each department will be edited by an authority, and will give a comprehensive review of the scientific work done during the preceding month.

GYNECOLOGY AND OBSTETRICS.

Edited by HUGO EHRENFEST, M. D., Consulting Gynecologist, St. Louis City Hospital.

La Grippe During the Puerperal State, and its Differentiation from Septic Puerperal Infection.—(M. Stolz, Graz, Austria.)—Within three weeks forty cases of la grippe were observed *in puerperis* at the Maternity of Graz. It was of the greatest importance, from a practical standpoint, to make the differential diagnosis from septic infection as soon as possible. In many cases great difficulty was offered to this task, as the symptoms often were those of sepsis. The following points have been found of value in arriving at a proper diagnosis:

In cases of la grippe the pulse-rate increases proportionately with the temperature—may even stay behind, as a consequence of the *bradycardia*, which we normally find during the puerperal state. Even at a high elevation of the temperature the pulse-rate never passes 100 to 120. The diagnosis of la grippe is rendered probable if there is an epidemic of this disease, if the characteristic bacilli can be found, if there are distinct local symptoms in the lungs, if the pulse is slow even in higher elevations of the bodily temperature, if a recurrence can be observed in the course of the disease. Symptoms like stinking discharge, subinvolution of the uterus and tenderness of the abdomen are not liable to secure the diagnosis of septic infection, as they are often observed in cases of la grippe. Stolz, reviewing his own observations, refers to the experience of Amann, Moeller, Gottschalk, etc., who found that deficiency of the involution of the uterus, hemorrhages during the puerperal state, decomposition of the lochial secretion, predisposition to infection of the pelvic contents, fast development of benign and malign growths, unfavorable influence upon the course of the puerperium, etc., are the more frequent sequelæ of an infection with la grippe during the puerperal state.—*Monatschr. f. Gbts. u. Gyn.*, June, 1901.

The Value of Antipyrin-Salol as a Hemostatic.—F. Spaeth, Hamburg, reports the results he obtained in seventy cases of uterine hemorrhage with this treatment. The method was inaugurated by Labadie-Lagrave, and consists in the following: Equal parts of antipyrin and salol are mixed and heated in a test-tube until the liquefying mixture

shows a brownish color, forming vapor of a sweetish odor. A thin sound armed with cotton is dipped into the hot fluid, and then as exactly as possible the cavity of the uterus, cleansed previously, painted. This procedure is to be repeated about two to three times in an interval of two to three days before favorable effect can be expected. Out of seventy cases, this method entirely failed only in six; in twenty-five cases both the immediate and the remote results were extremely favorable; in seven cases an excellent immediate effect was followed by recurrence of meno- or metrorrhagia at a later date. Most favorable were the results obtained in hemorrhage consequent to subinvolution of the uterus after confinement or abortion.

In summing up his experience, Spaeth concludes: "The melted mixture of antipyrin and salol is an excellent local hemostatic in uterine hemorrhages. Its effect seems to be based upon an irritating value which excites contraction of the uterus; therefore it gives good immediate and lasting results in all hemorrhages caused by atony of the uterine wall. If there is an excessive hypertrophy of the endometrium (endometritis glandularis or formation of polypi, etc.), a later recurrence of the hemorrhage is probable."—*Monatschr. f. Gbts. u. Gyn.*, 1901.

Indications and Limitations of the Vaginal Operation in Pelvic Diseases in Women.—(J. Riddle Goffe, New York City.)—Any operation that can be done as safely and satisfactorily for the patient, by the vaginal route as by the abdominal, should be done by the vaginal method. The dangers are less, the convalescence is smooth and the after-treatment simple, the patient being relieved of annoyance of stitches, adhesive plaster, bandage and dressings; there is no visible scar to remind her continually of her experience; and, above all, there is no danger of hernia. Concerning indication and limitation for this method Goffe says: "The only justifiable radical operation for uterine carcinoma is vaginal hysterectomy. When fibroid tumors are small, no matter in what part of the uterus they may be located, the vaginal incision affords opportunity for their complete and satisfactory removal. The limit for vaginal operation in fibroma is given in cases in which the tumor is sufficiently large and so located that the patient presents the appearance of a woman at the fourth or fifth month of pregnancy."

Cases of salpingitis and ovarian abscess are best treated through the vagina. If the disease involves the appendages of one side only, the other appendages being amenable to conservative work, then the pus is evacuated, the diseased appendages removed, and such conservative work as may be indicated done upon the remaining organs. If the appendages of both sides are hopelessly diseased, vaginal panhysterectomy is immediately decided upon, and the entire pelvis is relieved of all diseased tissue. Its ideal application has the vaginal method in the cure of displacements

of the uterus, whether they be simple or complicated by moderate disease of the appendages, with adhesions.—*American Medicine*, April 13, 1901.

An Analysis of my Vaginal Ablations in One Hundred and Eighty-One Cases of Pelvic Inflammation and Uterine Fibroid Degeneration.—(W. R. Pryor, New York City.)—The results attained by Pryor in these one hundred and eighty-one cases of vaginal panhysterectomy are remarkably good. He has cured eighty-three per cent. of all those who have applied to him, and that without mortality. In cases of pelvic inflammation he finds the indication for the radical operation when there were repeated acute attacks; when ectopic pregnancy of one side is associated with inflamed adnexa of the other; when adhesions and occluded tubes, after general peritonitis, are found combined with evidences of salpingitis; when hydrosalpinx of both sides is associated with many adhesions; finally, in all cases of genital sclerosis. When the adnexa of both sides are so damaged as to require removal, the uterus is thereby rendered not only a useless organ, but remains a mischievous one. The recent advocacy of conservative and complicated operations upon pus foci, necessitating, as they do, the use of much ligature and suture material, finds no response in him.

In regard to the treatment of fibroids, he never operates unless disagreeable symptoms are present. If he operates, he prefers the radical operation, either per vaginam or abdomen.

Reviewing the results, he concludes that the greater proportion of operations now performed through the abdomen could more easily and with better results be made through the vagina. He advocates vaginal operation not only because of the absence of risk, but because he is convinced that the convalescence after it is more smooth and free from complications than after laparotomy.

[Giving myself the preference to the vaginal route in gynecological operations, I think Pryor goes too far in declaring this method as particularly applicable in intraligamentous and retroperitoneal fibroids. At least, these cases offer especial difficulty in controlling hemorrhage.—ED.]
—*American Medicine*, April 27–May 4, 1901.

Complete absence of milk secretion immediately after delivery was observed by Keim (Paris) in a woman of thirty-three years of age. She was suffering from hysterical fits since her fifteenth year, and presented at the time of examination all the characteristic symptoms of hysteria. The mammae were of normal size and consistency, not the slightest secretion of milk. She claims that there was also an absolute absence of enlargement of the breasts and secretion of milk at the foregoing ten pregnancies, and that her mother, who was pregnant six times, showed the same abnormality. Complete lack of milk secretion after de-

livery is a comparatively rare condition; usually we observe agalactia during the course of nursing.—*Progres Medical*, April 27, 1901.

The routine examination of women following confinement is recommended by John Cooke Hirst (Philadelphia). The examination should be conducted about six weeks after the date of delivery. At this time, under normal conditions, the pelvic organs have returned to about their normal size and state. The objects of investigation should be: the presence and character of any vaginal discharge, the condition of the perineum and pelvic floor, the condition of the cervix, the position and degree of involution of the uterus, the condition of the broad ligaments, tubes and ovaries, and finally a specular examination of the vagina and portio.

If some abnormal condition has been found, the patient should be immediately advised to have the proper treatment. Thus it may become impossible for a patient in going to another practitioner for some pelvic trouble, to blame the first doctor for negligence in the manner in which he conducted the confinement.—*International Medical Magazine*, March, 1901.

Varicocele of the Broad Ligament.—John B. Shober (Philadelphia) adds one more case to the so far reported two cases of this condition. Remarkably enlarged veins, situated immediately below the fallopian tubes, between the layers of the broad ligament, form an elaborate plexus, which anastomoses freely with the uterine plexus. They are more frequent on the left side. The most characteristic symptom is a sense of weight and fullness in the pelvis, especially noticed at the sacrum or perineum. The diagnosis is made by a consideration of the symptoms and the physical examination. The dilated and tortuous veins can be felt as a yielding, compressible mass, which may reach the size of a hen's egg. The treatment is conservative or operative, depending upon the complications associated with it: as subinvolution of the uterus, extensive laceration of the cervix extending into the broad ligament, displacement of the uterus often associated with inflammatory changes of the appendages, chronic constipation, etc.—*Am. Jour. of Obstetr.*, May, 1901.

The Age of First Menstruation in the United States.—(G. T. Engelmann, Boston.)—Over 10,000 observations as to the time of first menstruation of American-born women gives him ample material for an authoritative solution of the question. The American-born are more precocious than the women of other countries in the same zone. Fourteen is the age of puberty in the United States and Canada, 15.5 in the temperate zone of Europe. Racial characteristics fade rapidly away. The age of puberty in Germany is about 15.5 to 16; for the girl born in America of German parentage, 14.5. Mentality, surroundings, education and nerve stimulation stand out prominently in this country as the factors which determine precocity.—*Jour. A. M. A.*, June 8, 1901.

The Influence of Rise of Body-Temperature Upon the Milk Secretion.—(Budin and Perret, Paris.)—In twenty-nine cases of febrile diseases, as la grippe, lymphangitis, infection of the genital organs, etc., the mothers continued nursing their babies. The authors were not able to observe any evil effect on the babies, and conclude that the milk of feverish mothers does not seem to be materially changed in quality. They think it not necessary in such cases to discontinue nursing, as usually done, a point of remarkable importance from a practical standpoint.—*Progres Medical*, May 25, 1901.

The Operative Treatment of Uterine Cancer.—J. Pfannenstiel (*Centralblatt fuer Gynaekologie*, April, 1901) gives a concise review of the results of the different kinds of operative treatment of uterine cancer:

(a) *High Amputation of the Cervix in Cases of Carcinoma of the Collum Uteri.*—This operation is justified in cases of carcinoma of the portio in an early stage, as has been proven theoretically by von Franque and Puppel, and clinically by Hofmeier, Winter and others, who have shown that in 27.6 per cent. there was no sign of return five years after this operation. Pfannenstiel, however, is not in favor of this conservative procedure. He thinks that in these cases of early stage the panhysterectomy is a comparatively easy operation; that in all these cases the endometrium is more or less diseased; that in a disease of so dangerous a character, preserving the capability of impregnation must not be a desirable aim. High amputation may be a shift where other conditions (age, general diseases, etc.) contra-indicate a larger operation.

(b) *Vaginal Panhysterectomy.*—Out of 116 cases operated by Fritsch ten died in consequence of the operation—*i. e.*, 8.62 per cent. On account of a better technique there was, out of the last 42 cases, only one death. Most of the recurrences developed in the first year after operation. After the fifth year no development of a recurrence has been observed. Free of a recurrence were: 6 years after operation, 14 women; 7 years after, 8 women; 8 years after, 3 women; 11 years after, 1 woman; 13 years after, 1 woman. Pfannenstiel performed vaginal panhysterectomy on account of carcinoma 93 times, with three deaths—*i. e.*, 3.2 per cent. of mortality, which is about the average rate according to the reports of other authorities. Of these operated, women were free of recurrence: 6 years after operation, 6; 7 years after, 5; 8 years after, 4; 9 years after, 2; 13 years after, 1. Carcinoma of the corpus offers a far better chance. Out of the cases of Fritsch and Pfannenstiel, none developed recurrence. Of the cases of carcinoma colli, those with cancer of the cervix give a better prognosis than those of the portio. (Recurrence in carc. portio, 61.4 per cent.; in carc. cervic., only 33.3 per cent. Ureters have been wounded during operation twice, the bladder twice.)

(c) *Abdominal Panhysterectomy.*—There are three operations of this kind:

1. Extirpation of the uterus alone (Freund).
2. Extirpation of the uterus, parametria and enlarged glands (Veit).
3. Radical operation—extirpation of the uterus, appendages, upper part, if necessary whole vagina, parametria, all glands in the iliac and sacral region in every case, if necessary with resection of the bladder or ureter (Ries, Werder, Koenig, Ricard and Wertheim).

The remote results with Freund's operation are much like those of the vaginal operation. The immediate results are better with the latter operation. Of nine patients operated upon according to Veit, two died in consequence of the operation (22 per cent.), both of peritonitis. In regard to remote results of this operation, he cannot say very much; seven women are alive, two of these already have suffered recurrences; in the other five the result is uncertain, not more than sixteen months after operation.

Radical operation (Wertheim) was performed but once; the patient died thirty-three days after operation, of *pyelonephritis*. His conclusions in regard to the abdominal operations are the following: The percentage of deaths as a consequence of these operations is exceedingly high. Freund-Veit's operation shows a mortality of about 20 per cent. (reports of Kuestner and Freund); Wertheim's operation of 38.9 per cent.

About the remote results of these more dangerous operations we do not yet know very much, as they have been practiced but a few years. However, the number of recurrences already observed, furthermore, theoretical reflections, do not seem to offer great hope. Not a reform or extension of our operative technique, but an early diagnosis, will better the results.

With satisfaction in different clinics of Germany it has been shown that the percentage of cases brought to the hospital in a still operative stage is continually growing. That seems to be due, firstly, to the fact that the gynecologists always called the attention of the general practitioners and the students to the early symptoms of carcinoma of the uterus; and, secondly, to the habit of making microscopical examination of every somewhat suspect scraping.

Pfannenstiel says, in conclusion, that as long as it is not proven that the more radical operations per abdomen give better remote results, vaginal panhysterectomy ought to be the routine operation.

G. Tizzoni (*La Riforma Medica*, Nos. 57-66) gives an account of the treatment of tetanus with anti-tetanic serum. Tizzoni's serum for tetanus does not possess as high antitoxic value as that of Behring's, but its curative power is greater. He says that the amount of antitoxic units in the serum has nothing to do with its curative powers, which depend upon the variety of substances present which can neutralize tetanus poison. The value of the Tizzoni serum was found not on cases in man, but on experimental animals. The animal of choice is the rabbit.

PATHOLOGY AND BACTERIOLOGY.

Edited by R. B. H. GRADWOHL, M. D., Pathologist, St. Louis City Hospital.

Hemorrhagic Malarial Nephritis.—Dr. James Ewing reported at the American Physicians' Association, an interesting case of hemorrhagic nephritis due to an accumulation of the malarial parasites in great masses in the kidney. Kidney disease due to malaria is not so uncommon in the South as it is in the North, the disease usually taking the form of a diffuse nephritis. This case, however, is rare, inasmuch as its manner of causation was in a mechanical way, rather than a toxic way. Toxic hemoglobinuria in malaria is frequently seen by the practitioners of the South.

Prevalence of Tuberculosis.—The investigation of Dr. Trudeau, has shown that eighteen per cent. of supposedly well people give a reaction to tuberculin. (*Annals of Gynecology and Pediatrics*, June, 1901.) The autopsies performed by Councilman, which have revealed the disease in seventeen per cent. of the cases which were supposed to be free from that disease, have confirmed this statement. This means that probably almost one-third of all civilized people are tuberculous. Truly an astonishing proposition! It is also true that post-mortem findings in other places and countries show even a larger percentage of signs of tuberculosis in supposedly well people. In the German institutes of pathologic anatomy one out of three individuals, on the average, show signs of active or healed tuberculosis. Virchow has given the figures, some time ago, as one out of seven, but the writer has seen it in one out of three. Truly this is an alarming picture, and only goes to emphasize the importance of enacting measures looking toward a stamping out of the disease.

Filtration of Water Supplies.—St. Louis has not yet taken steps towards filtering her polluted water. That the water is heavily polluted by sewage has been conclusively proven by the exhaustive investigation undertaken some time ago by Health Commissioner Starkloff. It is now high time for us to begin to filter this water. It seems strange that a St. Louis lay contemporary should continue to shower abuse on the efficacy of filtration, and urge instead the use by the city of water from the Meramec river. This abuse is entirely unwarranted when we consider that the main objection raised by this lay "authority" on drinking water is that by the process of American filtration alum is used which renders the water dangerous. It has been proven long since, by the investigations of Fuller at Cincinnati and elsewhere, that the percentage of alum used in this process is regulated to such a nicety that every particle of it is used up in the process of chemical combination. Filtered water is harmless.

The Visceral Form of Congenital Syphilis in its Manifestations in the Gastro-Intestinal Tract.—Oberndorfer speaks of the visceral form of congenital syphilis, especially its manifestations in the gastro-intestinal tract. In a boy of four months he found a gumma in the liver and a great number of ulcers in the stomach, ileum and large intestine. These ulcers showed microscopically not so much a loss of substance as erosion with a gummatous new growth of tissue. The adventitia of the vessels showed the new formation of tissue, with projections into the lumen eventually leading to obliteration of the vessels.

In going over the literature on this subject the writer found fifteen cases of syphilis of the stomach—six of which were of the congenital and nine of the adult form of syphilis. He also found twenty-five cases of intestinal syphilis which were congenital, and twenty-four cases of the adolescent variety. The lesion began in the majority of cases in the submucosa. There was no relation to the follicular apparatus in this condition. Clinically, nothing pointed to a syphilitic nature of the intestinal trouble.

It is announced that the dates of the next meeting of the Mississippi Valley Medical Association have been changed from the 10th, 11th and 12th of September to the 12th, 13th, and 14th of September. This change has been made necessary because the dates first selected conflicted with another large association meeting at the same place.

The meeting is to be held at the Hotel Victory, Put-in-Bay Island, Lake Erie, Ohio, and the low rate of one cent a mile for the round trip will be in effect for the meeting. Tickets will be on sale as late as September 12th, good returning without extension until September 15th. By depositing tickets with the joint agent at Cleveland and paying fifty cents the date can be extended until October 8th. This gives members an opportunity of visiting the Pan-American Exposition at Buffalo, to which very low rates by rail and water will be in effect from Cleveland.

Full information as to rates can be obtained by addressing the Secretary, Dr. Henry E. Tuley, No. 111 West Kentucky street, Louisville, Kentucky. Members of the profession are cordially invited to attend this meeting.

Those desiring to read papers should notify the Secretary at an early date.

MEDICINE—NOTES ON MALARIA.

The Italian Society for the Investigation of Malaria held its last congress March 23, 1901, under the direction of Prof. Celli.

Prof. Celli spoke of the work which had been done by members of the association in Rome, in hospital and private practice. This work consisted in an investigation into the epidemiology, pathology, therapy and prophylaxis of malaria. Prof. Celli summed up the work in the following words:

1. It can be positively stated that in any district where malaria is prevalent, the *Anopheles* is also present; but this rule reversed does not hold good. Ross, Grassi, Bignami and Bastianelli affirm that the *Culex* does not take part in the epidemiology of malaria, while Koch affirms that it does.

2. Any collection of stagnant water can be the breeding-place for the *Anopheles*. Lakes, like the Lake of Mantua, with practically no outlet, form no exception to this rule. It is incorrect to suppose that the existence of salt or sulphur in a given expanse of water prevents the larvæ of the *Anopheles* from breeding there.

The *Anopheles* larvæ die in the maceration fluid on the surface of the water. Rice fields, with stagnant water, or running water even, or even a rice field with the "changing system" or irrigation, are nests for the propagation of the *Anopheles* larvæ.

3. Geographically, the different varieties of malaria are distributed about equally over the Italian continent. The tertian severe type is found most extensively from the tropics to the Alpine regions. The light tertian type is found more frequently in the north than in the south. The quartan type is the least common type, but is evenly distributed, nevertheless.

4. The quartan, severe and light form of the tertian, have each a special epidemiological circle. The quartan type has the smallest percentage of recurrences, and appears the last from the standpoint of season. The light form of the tertian type begins first in upper Italy, and, of course, ends first.

5. There are three principal epidemics noticed when one travels from Germany towards the south: that of northern Europe, that of upper Italy, and that of Rome and southern Italy. They differ only in time of beginning, the first to begin being that in the extreme north. There are different types of fever met with, it is true; but that is dependent upon climatic conditions, and hence individual differences. The association has studied epidemics of malaria in the Alpine district, in the central Apennines, and in Calabria.

Dr. Dionisi has studied the pathology of the blood in malaria. He noted changes in the corpuscles of the blood in the veins and smaller

peripheric vessels. This investigation was carried out during the height of the fever, and also later on.

Celli, Panichi and Carducci have devoted their studies to an investigation of the immunity which might be acquired to the poison of malaria, especially working with the specific hæmolysin. They have proven that an artificial immunity towards malaria is best obtained by means of euchinin. Prof. Di Mattei, of Sicily, and others have confirmed this observation.

Lamonoco and Panichi have studied the action of quinine in these cases. A most important finding made by them is their discovery of the great agglutinative powers of malarial blood. By this agency they hope to obtain a speedy and sure means of making early diagnosis in cases of latent malaria.

Prophylaxis is the great field in which the association is working. Celli has already proven that he can protect against malaria, as in the case of the railway employees elsewhere cited. Bartianelli sent artificially infected mosquitos to London, where Manson worked successfully with them.

Through the efforts of the association, pure quinine is to be offered to the people of Italy at a much lower rate than it is ordinarily sold. This is to be incorporated in a government law.

Another measure which it is proposed to bring before the government as a law is the measure to make it obligatory on the part of people of malarial districts to use quinine, especially where pernicious malaria prevails. It is thought that in this way this severe form can be stamped out.

The association also proposes to distribute literature among the laity, instructing them as to the propagation of malaria, etc., so that they may better take heed of the precautions to be practiced.

Malaria Associated with Acute Abdominal Pain.—It may not be amiss to remind the practitioners of the South and Central States, wherein malaria is frequently seen, that some cases of severe abdominal pain likely to be thought appendicitis or colitis are really of neuralgic nature, due to the presence in the system of the malarial plasmodium. The symptoms point at first entirely to the abdomen, and it is only when the chill and fever occurs that one would think of malaria. In these cases it is urged to have a blood examination made, when the key to the situation will readily be discovered.

As to the manner of the causation of the neuralgic pains in the abdomen and neuralgia in general in association with malaria, Laveran thinks that the symptoms are due to an actual blocking up of the blood vessels by accumulation or plasmodia. Gowers, however, thinks the malarial pains are due to a depressed and anemic state of the nervous system. Marchiafava and Bignami question the etiology of this blocking up of the capillaries by the plasmodia.

The diagnosis of malarial pains can best be treated by first classifying malarial neuralgias. There are two varieties: *first*, toxic; and *second*, post-infective. Toxic neuralgias come on during the febrile attack and are associated with the presence of the parasites in the blood. The recognition of the malarial neuralgia is easy. The great difficulty lies in the recognition of the post-infective neuralgia. These cases are not associated with the presence of the plasmodia in the blood, but are the result of the anemic state of the organism.

Leube lays stress on the enlargement of the spleen in these cases, with history of chills and fever.

Obesity Acquired in Malarious Climates.—A strange fact—if only a coincidence—is that pointed out by Jones of Memphis. He claims that when some individuals move from a non-malarious to a malarious climate, they not only do not contract malarial fever, but they actually take on weight and become obese. He has noticed this in the South.

Prognosis in Comatose Malaria.—The prognosis in the comas of pernicious malaria depends to a large extent upon the history of the case in hand—*i. e.*, whether the patient has been suffering with previous attacks of malaria, or whether the attack in hand is the first or second one. If the patient has not had such previous attacks, then the prognosis is almost always fatal. Recovery from the coma in patients with no previous malarial history usually speedily follows on the administration of quinine. In the St. Louis City Hospital, the compiler has frequently seen these comatose forms relieved by the hypodermic use of quinine, and that form with urea is accepted as the best remedial agent for hypodermatic injection.

The Negro Enjoys Immunity from Malaria.—Just as the negro of the South usually enjoys immunity from attacks of yellow fever which kills off his less fortunate white brother, so does the negro escape malaria, as a rule. It is a matter of common knowledge that the negro of the South seldom, if ever, suffers with chronic malaria. It is questionable if ever a negro has been known to have suffered with malarial hemoglobinuria.

Nervous Manifestations of Malaria.—Gowers speaks of the occurrence of central paralysis due to malaria. Numerous cases are in literature on the nervous sequelæ of malaria. Suckling records one of the most interesting of these cases, and it may be well to cite it. His case was a paraplegia due to malaria, the paralysis occurring twice, each time a fortnight after an attack of ague, and in each instance recovery began on the third morning after the onset of the paraplegia, and was complete in a few hours. Another type is that reported by Romberg in 1853—one of the earliest reported cases—the paraplegia occurring on alternate mornings, at the same hour each time, and passed off in a few hours. Sensation was

not affected in this case, although a paralysis of the sphincters was present. The condition was controlled by quinine. Others who have reported malarial paraplegia are Hurd, Stockwell and Boinet. Boinet stated at the eleventh International Congress of Medicine that, among other nervous phenomena of malaria, he had seen many motor disturbances, paralyses, convulsions and choreiform movements.

Manneberg speaks truly of the unfortunate fact that in all the cases of nervous implication in malarial fever there has been but little opportunity or ambition on the part of the chroniclers of these cases to state what the nature of the pathologic conditions was at autopsy. A noted exception to this is found in the admirable paper of Spiller in the *American Journal of the Medical Sciences* for December, 1900. He reported a case of malaria presenting symptoms of disseminated sclerosis, with necropsy. The usual classical symptoms of multiple sclerosis were present. Pathologic findings were those usually found in this condition, with the addition of small hemorrhages found in the brain of recent origin.

The Condition of the Bowels in Malaria.—Some contend that diarrhœa is frequently a complication of malaria, and that we should use measures to guard against the occurrence of this condition in malarious subjects. A condition of paresis of the bowels in malaria is not always the rule, however. Very often the reverse is the rule, and in that case anti-constipative treatment should be employed. It goes without saying, that in a toxic state like malaria the bowels should always be stimulated to help throw off the infection, and that the practitioner should think twice or thrice before absolutely checking a diarrhœic state that may ensue.

Inunctions of Creosote in the Treatment of Malaria.—Some time ago Fitzgerald, of the Indian medical service, reported his success in treating patients affected with malaria with inunctions of creosote. These cases, so he claims, showed the parasites in the blood, and were not readily amenable to quinine treatment. By daily repeated inunctions of creosote relief was obtained. The creosote was mixed up with olive oil and rubbed in in the ordinary manner. This is claimed as an ideal treatment for children.

Malaria and Pregnancy.—The occurrence of malaria during the course of pregnancy often works havoc, by sacrificing the life of the fetus, and often endangering the life of the mother. Simple remittent fever seldom affects the course of pregnancy, either by endangering the life of the fetus or that of the mother. It is in intermittent fever that we must look for trouble when occurring in a pregnant woman. It almost always produces abortion. The *raison d'être* for the production of abortion in these cases is the sudden rise in bodily temperature. By rapidly lessening this rise with quinine medication, some chance is given for the mother and fetus to escape unharmed.

SURGERY.

Edited by NORVELLE WALLACE SHARPE, M. D.

Malignant Growths.—The following are some of the conclusions reached by Mason (*British Medical Journal*, May 18, 1901) and presented before the British Medical Association. They are deduced from an analysis of 5000 lethal cases due to malignant growths. While hardly in accord with the generally accepted thought, yet as a contribution to our knowledge of malignant disease, the report is of value.

Diabetes in Surgery.—Robert T. Morris gives three reasons why diabetes interferes with surgeons: (1) The sugar circulation in the blood is hygroscopic and it draws water from all the body until the tissues are actually dry. This must interfere with the normal process of repair, and it probably does so in several different ways. (2) The surgeon must give these cases his special attention, because the fluids of a wound loaded with sugar are in all probability excellent culture media for bacteria, and are particularly suitable for the growth of bacteria therein. (3) Certain anesthetics may precipitate an impending nephritis because of the unusual labor involved in excreting sugar. In these cases the author uses nitrous oxide and oxygen instead of the other anesthetics, especially avoiding the use of ether.

Catharsis in Abdominal Surgery.—Crandon gives the results of observations made during his service as house officer in the Boston City Hospital on catharsis in abdominal surgery. It has been proven by a number of experiments that peristalsis is a reflex action. The lower part of the ilium has been proven to be the place where the contents of the intestine move the fastest. It has been found that the vagus nerve when stimulated directly or reflexly increases peristalsis, and that moderate stimulation of the splanchnic nerve decreases it.

Any decrease in the normal activity of the nerves or nerve-centers means constipation. This author studied cases of abdominal section, and concludes that (1) in acute pelvic peritonitis, both enemata and drugs by mouth, should be used to produce catharsis before operation; drugs by mouth and oil per enemata after operation. (2) In all acute inflammatory conditions in the abdomen in which the alimentary tract is involved the bowels should be moved by enemata alone before and after operation, the enema of salts, turpentine and glycerine being the best.—*Boston Med. and Surg. Jour.*, June 27th.

Some Statistics on Cancer.—Dr. Nanson found that the preponderance of females over males as the subjects of cancer was about sixty-two to thirty-eight per cent., due to the fact of the great frequency of breast and

uterine involvement. If the sexual peculiarities of the two sexes be excluded, the male is found to be the more often affected, in the proportion of fifty-three to forty-seven per cent. It furthermore appears that the steady increase in the frequency of occurrence of cancer has been far more noticeable in men than in women.

A Case of Primary Carcinoma of the Vagina.—A case of this uncommonly rare disease is recorded by Gill in *The Lancet*, June 1. The patient was a healthy-looking woman, age about thirty years, who had requested her husband to call upon me to get a lotion for the whites, but for which I declined to give a prescription without seeing the patient. The writer found that the discharge was often tinged, and that there was frequently pain and some hemorrhage upon coitus. On examination, about two inches within the vagina was found a cauliflower-like growth about the size of three walnuts, with a base the size of a florin. There was no thickening around the base of the growth, as demonstrated by placing a finger in the rectum and one in the vagina. Beyond the growth the vagina, as well as the cervix, was perfectly healthy. Several glands in both groins were enlarged and tender. The growth was removed by a circular incision, and the glands in the groin were also removed. The growth returned in less than a month and spread to the tissues above so that a constriction of the bowels was feared. The patient afterwards developed disseminated masses under the skin of the abdomen. Microscopically, the growth was found to be cancerous.

Asepsis of the Surgeon's Hands by Means of a Protective Varnish.—M. Marian, finding great difficulty in removing the odor from his hands after post-mortem examinations, varnished his hands and thus overcame the difficulty. He has experimented bacteriologically to ascertain if it is safe for a surgeon with the aid of varnish to operate after having his hands in a septic fluid. His answer is in the affirmative. The composition of the varnish is not stated, but he obtains it from Soehnee Freres. It has antiseptic properties, and is mixed with oil of lavender, is easily removed after washing with soap and then alcohol, and adheres four or five hours. —*Gaz. des Hop. de Toulouse.*

Thoracic Aneurisms Treated by Gelatin Injections.—Many reports have appeared on the treatment of thoracic aneurisms by means of subcutaneous injections of gelatin. The great drawback to the operation is the extreme pain occasioned by making the injections. Another point of difficulty is the fact that the gelatin, unless carefully prepared, is certainly dangerous to use. Corner has reported three cases in which he used this treatment, showing mainly the difficulties encountered in the use of such a measure rather than the results accomplished by it.

PEDIATRICS.

Glandular Fever.—Marcel Labbe, in *La Presse Medicale*, says that the term glandular fever, as used since Fifer's description of the disease *Dru-sen Fieber*, designates a disease characterized by more or less febrile disturbance with glandular tumefaction, but rarely followed by suppuration. Commonly the fever begins abruptly, either coryza or stomatitis and an erythema of the throat. This angina is often so slight that it escapes observation. Two or three days later the glands begin to swell, those most frequently involved being in the neck, the submaxillary, or at the angle of the jaw. The ganglionic masses are often painful, and the inflammation increases. Occasionally there may be suppuration. As a rule, the fever declines a few days after the swelling begins, and for some time after the cessation of the fever the glands decrease in size. The affection is usually benign, but suppuration may occur. This is a disease of infancy or early dentition; occasionally it is observed in adolescence. Sometimes it occurs in several members of a family, but it never occurs in a way to suggest an epidemic. The writer regards the term glandular fever as a misnomer, if used in the sense of a specific disease. It has no specific term, but is due to an infection derived from the mouth, nose or the pharynx.

Saline Infusion in Puerperal Eclampsia.—Groves read a paper on the pathology and treatment of puerperal eclampsia before the Obstetrical Society of London (*The Lancet*, April 27th). In the treatment he referred especially to the use of saline infusions, and gave notes of his cases. One was a primipara of twenty-three years, who had convulsions after an easy labor. In spite of morphine and pilocarpine, they increased in severity for twelve hours. Intravenous injection of eleven ounces of hot normal saline solution was followed by rapid improvement. The coma and convulsions lessened at once, and ceased within three and a half hours. A second case was that in which the coma and anuria ushered in labor at full term. The attacks were of extreme violence; twenty-six occurred between 2 A. M. and 4 P. M. An intravenous injection of seven ounces of normal saline solution lessened the attacks, which ceased at the end of fourteen hours. At the end of forty-eight hours coma had passed off and diuresis was established.

Diabetes Mellitus in a Child Aged Six Months.—L. Baumel, in *Annales de Medicine et Chirurgie Infantiles*, January 1901, reports two cases of diabetes in children. The first patient was a child of thirteen years, and second an infant of six months. Both died, but an autopsy was only performed in the last case, which forms the subject of this paper. A marked atrophy of the pancreas was found.

In the light of present knowledge, especially that given by Ludwig,

Rossa and Bell, it may be said that diabetes may exist in the fetus. Some observers claim that the glycosuria observed during the first months of life is nothing but the accidental presence of lactose in the urine, due to some gastro-intestinal disturbance. The present author, however, considers such cases as really diabetes mellitus in an attenuated form. He thinks that the pancreas is always the cause of the affection, and that it is not due, in children, as some assert, to infection or heredity. He thinks that dentition may act as a contributing cause, irritating the trigeminal nerve and reflexly affecting the medulla and pons. His treatment is as follows: alkalies to better the condition of the pancreas; calcium phosphate or glycono-phosphates to help dentition; as thrush is a frequent complication of dentition, he recommends its prophylaxis by swabbing the mouth with boric acid lotions, or by the use of the following mixture, given in teaspoonful doses at intervals of three hours:

R	Lime water,	Grammes.
	Lactucarium water.....	aa 60.0
	Simple syrup.....	30.0
	Tincture of musk.....	4 drops

In addition, bromides may be required to soothe the irritability of the nervous system, and pancreatin may be given in cases that resist the above-mentioned measures. Possibly in future hypodermatic injections of pancreatin may be used in diabetes as in the diabetes of infancy, as the ferment is digested in the stomach.

The Diagnosis of Diphtheria.—Dokin (*Britt. Med. Journal*, November 3, 1900) says that the tendency of the physician of to-day is to rely blindly upon the results of bacteriological examinations in diphtheria. The physician should not wait until the report of the bacteriologist comes in, but should treat the case as diphtheria if the clinical symptoms warrant it. If there are no clinical signs of diphtheria and the diphtheria bacilli are found, then the case should be treated as diphtheria.

The Care of Premature Babies in Incubators.—Many lives can be saved annually by the use of the couveuse for premature babies. Before the innovation of this means of practically substituting an artificial environment for the immature infant, all these lives were sacrificed upon the altar of inexperience and ignorance. Now we may save these lives. James D. Voorhees gives a good review of the work done at the Sloane Maternity Hospital in New York, in the direction of incubator life for premature babies. At the Sloane Maternity Hospital premature babies are classified as follows:

1. Those treated as babies at term.
2. Those wrapped in cotton.
3. Those kept in the incubator.

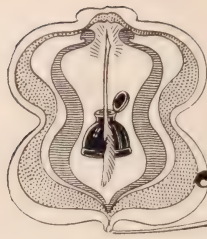
The Lion incubator is probably the best in use. It fulfills the four problems to be solved in the management of premature babies:

1. The maintenance of a proper temperature.
2. The prevention of exhaustion.
3. The administration of the proper amount and kind of nourishment (permitting the nurse to feed the child through a glass window at the side).
4. The avoidance of infection; the temperature is kept equable by means of a metallic thermo-regulator.—*Pediatrics*, July, 1901.


The Pathogenesis of Night Terrors in Children.—J. G. Rey says that night terrors are always due to some obstacle to respiration and hematosiis; the obstruction may be of reflex origin. The terrors are merely the result of a slow and prolonged carbonic acid intoxication, which explains all the accompanying symptoms. Since all night terrors are symptomatic, it is useless to classify them as idiopathic or symptomatic. If two varieties are absolutely desired, one may separate those due to a direct obstruction to respiration from those due to a reflex cause.—*Rev. Mens. des Mal. de l'Enf.*

Empyema in Children.—Crandall (*International Med. Magazine*) states that aspiration and other temporizing means are futile. Free incision with drainage is the best method of treatment. Differences of opinion exist only as to the extent of the operation. If performed early, simple incision has sufficed, in the experience of many, to promote free drainage. If performed late, the ribs should be carefully excised. The incision should be free; the drainage tube should be of good size; the cavity should not be irrigated; and every effort should be made to keep the wound in an aseptic condition.

Blue Urine.—A case is recorded in *The Lancet*, June 1, of a patient passing blue urine. As we know, methylene blue is now prescribed by the profession, and the urine of patients taking it becomes blue in color, but this was apparently not the cause of the blue color of the case referred to. Good, who handled this case, made careful inquiries and found that the patient had not been taking methylene blue. Good suggested that the blue color was due to the presence of indol arising from proteid decomposition. Indol by the putrefactive action of the bacillus coli forms indican, which, on oxidation, causes the formation of indigo. For these chemical changes to occur before the urine is passed is rare, but this phenomenon has been noted in typhus and in cholera. The blue color has been more frequently seen when the urine has been exposed to the air and is becoming decomposed. Indican occurs in the urine more particularly in cases of constipation and in cases of long-continued intestinal obstruction.



Personal Comment



Warren B. Outten.

Is Psychology Placed in its True Position in Medicine?—Carefully study the field of medicine and then must come the thought that the psychological elements of disease are not studied as fully as their importance demands. The causative factors of disease cannot always be determined, but in every instance the mentality of the patient has a most positive and undoubted influence in cause, course and result.

There can be no doubt but that many troubles have for their cause psychological troubles. The physician, too, often becomes the convinced victim of a dangerous pessimism. Thus in the examination of a case in the course of treatment pathological evidences present themselves in such a portentous and seemingly undoubted profusion that the physician becomes convinced of the impossibility of a cure. He then becomes an instrument in the succumbing of the patient. This patient already is in the throes of an oppressive psychological state, and it needs but little to fix upon such a mind a fatal suggestion. It is not given to the physician the power to interpret the deep, true and possible ability of nature to cure, seemingly, the most pronounced and necessarily the most morbid conditions. If then the physician in many instances cannot be absolutely certain of what nature can accomplish, he certainly errs when he presumes to interpret the laws and ultimatum of God Almighty.

It is a sad but eternally constant truth that the influence of a determined but misguided opinion upon the part of the physician has been the cause of death more certainly than the diseased condition. The physician is not by any law of morality or justice constituted the arbiter and judge of what nature can and must do. If mind is the man, if mind is that power that controls the physical nature of man, it then must have a powerful bearing upon all diseased conditions. Many a patient has been literally choked to death by a predetermined and brutal self-opinionated suggestion.

The most successful physicians of this or any other age have been the interpreters of psychological conditions. The physician cannot afford to neglect the psychological factors in any disease, since man to-day is the creation whom inherited mentality rules to his ruin and death. Who after due deliberation would dare to assert that an inherited mentality has not stamped upon man the incurability of cancer and hydrophobia? As age upon age has come and gone, man in utero, growth and maturity has his mind stamped, and indelibly stamped, by the thought, assertion and

consequences of the absolute fatality of these troubles. Take from the patient this inherited belief and we honestly believe that the fatal elements of disease, of many diseases, may be removed. There are few diseases to which man is subject in which psychological conditions can be ignored.

The educated physician must deplore and wonder how such an insane doctrine as Christian Science can flourish, but it flourishes because it gets results. Strangely but truly it often reaches results where physicians of ability have failed. To our mind these results are plainly traceable to psychological influences. In fact, when science fails most oft, the pretender succeeds, because the psychological condition has been interpreted aright.

"The mind can make substance and people planets as its own." The mind is the standard of the man, and can make or bankrupt him by vicious suggestion. We as physicians know that in disease the mind is able to influence physical conditions profoundly. The sick man's mind is a tremendous area where adverse suggestion plays havoc. It is true that man's mind is the victim of eternal suggestion. Its very nature makes it an acute receptacle to suggestion. It absorbs and incorporates into its own cellular folds and convolutions all ideas which it receives. Hence this delicate receptive and absorptive organ must be treated with some acumen and care.

We commend this thought of Pascal: "The mind of the greatest man on earth is not so independent of circumstances as not to feel inconvenience by the merest buzzing noise about him. It does not need the report of a cannon to disturb his thoughts. The creaking of a vane or a pulley is enough. Do not wonder that he reasons ill. Just now a fly is buzzing by his ear. It is quite enough to unfit him for giving good counsel." Medicine to grow great and more efficient must study more deeply psychological conditions. The progress of the future must come largely through psychology. We have dallied with substance to the detriment of the mind. We must believe that mind is the golden key to open the doors of all future progress, and a comprehension of its wonderful powers and effects will lead to the elevation of medicine and the blessing of mankind.

Musical Anæsthesia.—Helmholtz says: "Music stands in a much closer connection with pure sensation than any of the other arts." It is asserted that music is the mediator between the spiritual and the sensual life; the most immediate means possessed by the will for the manifestation of its inner impulses. While we know that music is a crystallization of sound, the true universal speech of mankind, making men milder and gentler, and that it hath charms to soothe the savage breast, still, in our wildest dreams we did not know that it was the sweetest and best of anæsthetics. We see it announced that musical dentistry has brightened the horizon for all toothache sufferers. This subject has been taken up by a well-known physician, who expounded it before the Paris Academy of Medicine, and has thus

received the sanction of high scientific authority. The method consists in drawing teeth to the sounds of sweet music. This trying operation becomes not only harmless, but decidedly pleasant. The idea was first suggested by observation of patients under the influence of anæsthetics, such as nitrogen proto-oxide in vapor. The incipient effect of this vapor in nearly every case disagreeable, sometimes producing almost unbearable sensations resembling those experienced in nightmare. From this fact a conclusion was reached that these bad dreams at the beginning of the anæsthetic influence were caused by the perception of noises around suggesting to the mind when in partial consciousness. Now, if these noises suggested bad dreams, why not soothe the mind and suggest sweet dreams in this partial and temporary oblivion, through sweet and delightful sounds? The experiment was tried; beautiful and entrancing sounds filled the operator's room; the result completely charmed both patient and operator. The patient neither gave vent to contortions nor groans, and permitted the operator to work with ease and pleasure, the only retrospections left with the patient were sweet and lovely, since he could only remember some striking bars of delightful harmony from Lohengrin. The operator, under the influence of the music, worked as good as gold, for tooth-pulling had become sweetly harmonious since no agonized screech or soul-aggrieved groan rent the air. But in its place this tableau grew into actuality: the occupant of the dreaded dental chair awakes with a beatific expression upon his face, his ears still humming with beautiful sounds, while the smiling dentist displays the extracted tooth. Now, with this new form of anæsthesia a new requirement is demanded—that is, a judicious selection of music to suit different people; for if a bad selection is used, hideous nightmares and dreams might come again. We once heard a steam piano in operation, and it was the first and only time which the writer of this believed that he could have committed murder with fiendish and ecstatic pleasure. If musical anæsthesia becomes more extended, it will only be a mere matter of time before some of our metropolitan hospitals will have Sousa's band or Theodore Thomas' orchestra discoursing music while laparotomies, etc., are performed. But, thank heaven, the field of music is filled with means without end here; the talking machines will soothe the excited air in the doctor's office, instead of only being monopolized by bar-rooms, etc. We trust that musical anæsthesia will enlarge and be truly successful; then there will be no more nausea, vinegared towels and other paraphernalia. Artemus Ward was the first person who seemed to connect music with teeth, since he said that in Salt Lake City, Utah, that he knew a man out there "who did not have a tooth in his head, and yet he could beat the base drum as good as anybody on earth."

How the Vocal Cords Operate.—Prof. Scriptun, in the April number of the *American Journal of Science*, concludes that the so-called vocal cords cannot vibrate in the manner of strings nor of tongues of reed-pipes, but

must vibrate compressively in the manner of elastic cushions. Prof. Joseph Le Conte in *Science* reviews the opinions upon this subject and says: "On page 210 of my book on Comparative Physiology and Morphology of Animals—speaking of the larynx as a musical instrument—after showing that it cannot be likened to a stringed instrument or reed-pipe, I say it is strange that no one has thought to liken it to an ordinary horn; or better, a French horn. In this instrument the sound is modulated exactly as in the larynx or by the tension and pressing together of the lips of the performer. The edges of the rima glottidis ought to be called the vocal lips, as indeed they are, and not the vocal cords, which they are not in any sense. The analogy between the two instruments is perfect. The performer of the horn presses his lips together tighter, makes them tenser and the opening between them smaller, in proportion as he desires a higher note. He then drives the air between the tense lips so as to set their edges in vibration. This vibration by alternate partial closing and opening of the aperture gives rise to successive jets or pulses of the outdriven air, and this in its turn gives corresponding pulses to the air in the sounding cavity of the horn, precisely the same as we have seen takes place in the larynx. The only wonder is that so small an instrument as the larynx and the mouth cavity should be capable of such marvelous effects."

The scarlet fever epidemic in Keene, New Hampshire, led to the Cheshire National Bank of that town sterilizing all the money which passed through it. This was accomplished by a special sterilizing oven which was erected for that purpose. The precaution will, we are sure, commend itself to the profession.

Considerable attention has been given in the public press to a bill for \$190,000.00, which was rendered by Dr. Browning, of Philadelphia. It seems, however, that this bill was made up of separate charges made at regular rates, and the account rendered each month. The very large sum was made possible because of the fact that the patient was twenty-one months under the care of the physician, receiving more than 5000 hours of service; more than 2000 of which was for night visits.

Drinking on the Decrease in Ontario.—In 1889 the convictions for drinking in Ontario amounted to 4797, but in 1899 this had dropped to 1892, a decrease of over sixty per cent. In 1889 there was one conviction for drunkenness in every 295 persons, and in 1899 one for every 826, and the figures indicate that between these years the reduction was progressive.



The American Pocket Medical Dictionary, Revised Edition. Edited by W. A. NEWMAN DORLAND, A. M., M. D. Philadelphia: W. B. Saunders. 1899.

This very compact little dictionary is a valuable book for the medical student to carry in his pocket and consult at times when he needs explanation of medical terms. It is thorough and is correct. We cheerfully recommend it.

A Text-Book of Gynecology. Edited by CHARLES A. L. REED, A. M., M. D., President of the American Medical Association (1900-1901); Gynecologist and Clinical Lecturer on Surgical Diseases of Women at the Cincinnati Hospital, etc., etc. Illustrated by R. J. Hopkins. New York: D. Appleton & Co. 1901. 900 pages.

The object aimed at by Reed has been accomplished in an excellent way. He has produced a working manual for practitioners and students, which embraces the best approved development of gynecology. He has skillfully united the contributions of many writers of reputation to a complete consecutive work, which does not show anywhere that it is an aggregation of monographs. Those introductions, written by Reed to most of the chapters in his well-known masterly manner, often refer to historical facts and prove his familiarity with the medical literature of the world. Everywhere conservatism in the treatment is emphasized; nevertheless he warns of overdoing in this respect, as "conservative gynecology demands saving health rather than diseased, useless organs." The best of all these good chapters seems to be that dealing with the carcinoma of the uterus. It really incloses everything worth knowing on this question, which at present is one of the most important and ardent in gynecology. Reed, Herzog, Carstens, Newman and Robb contributed to this chapter. The few defects easily could be mended in the next edition. It would be desirable to replace some of the histological drawings by better ones. It would be in the interest especially of the students to give the pictures of bacteria in more uniform enlargement. For instance, the disproportion between the staphylococci in Fig. 15 and the streptococci in Fig. 16 is very striking and is liable to mislead the student. The drawings would better be furnished with a short description of their object, instead of the quotations taken out of the text. The absolute necessity of aseptic precautions at any introduction of instruments into the uterus ought to be stated more emphatically. Among the operations of uretero-vaginal

fistulas the excellent vaginal method of Mackenrodt would be worth mentioning. Injuries to the vulva by the sexual intercourse (page 136) aside from slight lacerations of the fourchette are not so very rare an occurrence. In *Monatschrift f. Geb. u. Gyn.*, 1899, Neugebauer gives the report of one hundred and fifty-seven severe cases of this kind, twenty-two of which ended fatally. To the benefit of many the year should be added to the name of the journal to which reference is made. These trifling defects, however, do not detract from the value of this classic book. We cannot doubt that Reed's book will before long be the most widely used text-book of gynecology, as it justly deserves to be.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug-Giving, Useful in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A. M., M. D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic; Lecturer on Clinical Medicine at Jefferson Medical College, etc. Volume I.: Electrotherapy. By GEORGE W. JACOBY, M. D., Consulting Neurologist to the German Hospital, etc. In two Books. Book I. With 163 Illustrations. Philadelphia: P. Blakiston's Son & Co. 1901.

This system of therapeutics will embrace the treatment of disease other than by drugs. We know that there are many things that are good in the field of remedial agents which are not found on the shelves of the dispensing pharmacist. We know that the physician is too prone to fall into the rut of prescribing and neglecting all else in the domain of therapeutics. It is the office and intention of this System to lay before the physician all the means outside of mere drugs which are of use in the "healing art." The first part is devoted to Electro-Therapeutics, which is ably handled by George W. Jacoby. In this volume are considered the essential principles of electro-therapeutics, with an exposition of the manner of application of electricity, all of which is well shown in good illustrations scattered throughout the book. We bespeak a pronounced success for the System, as the first volume is an admirable edition. Physicians cannot be too urgently enjoined to follow out the mechanical and other remedial means which offer good results in therapeutics.

Municipal Sanitation in the United States. By CHARLES V. CHAPIN, M. D., Superintendent of Health of the City of Providence. The Providence Press, Snow & Farnham, Providence, R. I. 1901.

The author of this volume is well known, personally or by reputation, to very many of the public health officials of this country, and he has laid them under obligations by the preparation of a work which should be where every one interested in applied sanitation could lay his hand upon it. In the preface it is stated that the work is not a treatise on the principles of sanitation, but rather a compendium of sanitary practice, and not so much intended to advise what ought to be done, as to record what has

been done. "The subject under consideration is the sanitary functions of municipalities, the latter term being used in its broadest sense, including cities, villages, townships and counties." The purpose thus expressed is well adhered to, and the result is an excellent presentation of the working methods of localized public health organizations in this country. The contents number fourteen chapters, of which those on Sanitary Organization, Nuisances, Food, and Communicable Disease and that on Refuse Disposal, may be mentioned as being of especial value. The spirit of the work is thoroughly scientific and in keeping with modern thought, while the labor involved in collecting the *data* used in its production must have been very great. The only criticism that may, perhaps, be offered is that no intimation is given of the impending change in the *rationale* of quarantine and disinfection, due to the recognition of the active agency of suctorial parasites in the communication of disease. Nor does there appear to be any good reason why, in another edition, the sanitary methods pursued in our neighboring countries of Canada and Mexico, as established or modified by direct British, French or Spanish influence, should not be described as an essential part of American municipal hygiene.

The Technique of Surgical Gynecology. By A. H. GOELET, Professor of Gynecology in the New York School of Clinical Medicine; Consulting Professor of Gynecological Electro-Therapeutics, International School of Correspondence, Scranton, Pennsylvania, etc., etc. 340 pages. 150 Original Drawings. International Journal of Surgery Co., New York. 1901. Price, \$2.00.

In a most comprehensible manner the author describes in this book the operative technique of the more common gynecological operations, giving no space to diagnosis or indication for operation. With great exactness some chapters deal with the preparation for operations and after-care of the patient. It is to be regretted that as a rule only one method of procedure is described for each condition, as thus a great number of generally approved, excellent operations were excluded from being mentioned. We recommend every surgeon doing gynecological work to study this book, which contains very much useful advice. Special attention of the reader may be called to some original inventions of the author, as the dilators, the very simple leg-holder, and especially the rubber sponge tent cover, for aseptic dilatation of the cervix by means of tents.

Tuberculosis: A Disease of the Masses and How to Combat It. Prize Essay, Berlin, 1899. By S. A. KNOPF, M. D., New York: M. Firestack, 200 West Ninety-sixth street, New York. Single copy, Paper, 25 cents; Cloth, 50 cents.

This is undoubtedly the most popular essay upon tuberculosis of recent date. As the title indicates, it is intended more for the dissemination of general information regarding the public question of the limita-

The most Perfect Form of Dosimetry is afforded by

PARVULES

THE term Parvule, from *Parvum*, (small) is applied to a class of remedies (Warner & Co.'s) in the form of minute pills, containing minimum doses for frequent repetition in cases of children and adults. It is claimed by some practitioners that small doses, given at short intervals, exert a more salutary effect. Sydney Ringer, M. D., in his recent works on Therapeutics, sustains this theory in great variety of cases. 20 cents per 100.

PARVULES OF CALOMEL, 1-20.

MED. PROP.—ALTERATIVE, PURGATIVE.

Dose.—1 to 2 every hour. Two Parvules of Calomel, taken every hour until five or six doses are administered (which will comprise but half a grain), produce an activity of the liver which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

PARVULES OF CALOMEL AND IPECAC.

MED. PROP.—ALTERATIVE, PURGATIVE.

R_x Calomel, 1-10 gr.
Ipecac, 1-10 gr.

Dose.—1 to 2 every hour. Two Parvules of Calomel and Ipecac, taken every hour until five or six doses are administered (which will comprise but a grain of Calomel), produce an activity of the liver, which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

PARVULES OF ALOIN, 1-10.

MED. PROP.—A MOST DESIRABLE CATHARTIC.

The most useful application of this Parvule is in periodic irregularities—Dysmenorrhœa and Amenorrhœa. They should be given in doses of one or two every evening at and about the expected time.

Dose.—4 to 6 at once. This number of Parvules, taken at any time, will be found to exert an easy, prompt, and ample Cathartic effect, unattended with nausea, and in all respects furnishing the most aperient and cathartic preparation in use. For habitual constipation, they replace when taken in single Parvules the various medicated waters, avoiding the quantity required by the latter as a dose, which fills the stomach and deranges the digestive organs.

PARVULES OF PODOPHYLLIN, 1-40.

MED. PROP.—CATHARTIC, CHOLAGOGUE.

Two Parvules of Podophyllin, administered three times a day, will re-establish and regulate the peristaltic action and relieve habitual constipation, add tone to the liver, and invigorate the digestive functions.

PARVULES OF NUX VOMICA, 1-50.

(WARNER & CO.)

Nux Vomica, according to Dr. Ringer, is possessed of real curative powers for sick headache, accompanied with acute gastric catarrh, whether due to error in diet, constipation, or to no apparent cause. He regards it, administered in small and frequently repeated doses, as useful in many disturbances of the gastric functions.

SUPERIOR TO PEPSIN OF THE HOG
INGLUVIN

A Powder—Prescribed in the same manner, doses and combinations as pepsin.

A SPECIFIC FOR VOMITING IN GASTRATION IN DOSES OF 10 to 20 Grains.

WILLIAM R. WARNER & CO.

PHILADELPHIA
NEW YORK
CHICAGO

LARGEST PILL FACTORY IN THE WORLD.

For sale by all druggists or sent by mail on receipt of price. Physicians' private formulæ made up in lots of 3,000 and over. Pills, granules or compressed form. Write for quotations.

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

tion of tuberculosis than to be ultra-scientific, and yet Dr. Knopf has condensed within eighty-six pages probably more valuable information for physicians and boards of health and the public generally than has been accomplished by any similar attempt.

The fact that this essay received the prize of 4,000 marks from the International Congress for the Study of the Best Way to Combat Tuberculosis as a Disease of the Masses, at Berlin in 1899, and the further fact that eighty-one essays were presented in competition, is perhaps its best recommendation. The writer has done more to arouse practical interest and to develop and advance conclusions and perfection than probably any other man in America. We commend this essay highly. W. P.

Annual and Analytical Cyclopædia of Practical Medicine. By CHARLES E. DE M. SAJOURS, M. D., and One Hundred Associate Editors, Assisted by Corresponding Editors, Collaborators and Correspondents. Illustrated with Chromo-Lithographs, Engravings and Maps. Volumes I., II., III. Philadelphia, New York, Chicago: The F. A. Davis Company, Publishers. 1900.

The "Annual" as it is now presented to readers is rather a unique work, and withal one which will prove invaluable to the medical profession. The book takes up subjects and discusses them, first in the light of the present knowledge on the subject, then with a review of the literature on the same during the past ten years. In this way the practitioner is furnished with facts concerning any given subject, together with all that is recent and all that is a few years old; his memory is constantly refreshed, and he has a lucid and complete exposition of all which he desires. In the same way the investigator, anxious to delve deep into the subject, has the key to the situation by the quotation of the work done by his fellow-workers. Volume I. goes into the subjects from Abdominal Injuries to Bright's Disease. The subjects included under these heads are well treated, and nothing remains to be added. The "Annual" should grace every physician's library.

Volume II. of this excellent work is before us, and we take pleasure in according it the same enthusiastic welcome with which the first volume was received. The subjects of Bromide of Ethyl to Diphtheria are taken up in this volume. The same careful review of the literature of medicine is found in this volume as in the preceding. A most excellent article is that on Cerebral Hemorrhage. It is not to be wondered at that the book is of such a high order when we consider, first, the reputation of the chief editor; and, secondly, the ability of the staff of editors collaborating with him.

Volume III.—The preceding volumes have already been noticed. It gives us great pleasure to repeat the unqualified commendation therein



HYDROZONE

(30 vol. preserved
H₂O₂ solution.)

IS THE MOST POWERFUL ANTISEPTIC AND PUS DESTROYER.
HARMLESS STIMULANT TO HEALTHY GRANULATIONS.

GLYCOZONE

(C. P. Glycerine
combined with Ozone.)

The MOST POWERFUL HEALING AGENT KNOWN.

Successfully used in **Diphtheria, Croup, Scarlet Fever, Sore Throat, Catarrh of the Nose, Ozæna, Hay Fever, LaGrippe, Bronchitis, Asthma, Laryngitis, Pharyngitis, Whooping Cough, Etc. Inflammatory and Suppurative diseases of the Ear.**

Send for free 300-page book "Rational Treatment of Diseases caused by Germs," containing reprints of 140 scientific articles by leading contributors to medical literature.

Physicians remitting 50 cents will receive one complimentary sample of each, "Hydrozone" and "Glycozone."

Hydrozone is put up only in extra small, small, medium and large size bottles bearing a red label, white letters, gold and blue border, with my signature.

Glycozone is put up only in 4-oz., 8-oz. and 16-oz. bottles bearing a yellow label, white and black letters, red and blue border, with my signature.

Marchand's Eye Balsam

cures all inflammatory and contagious diseases of the eyes

DISTRIBUTING AGENTS:


Thomas Christy & Co., 25 Lime St., London, Eng.
Leeming, Miles & Co., 53 St. Sulpice St., Montreal, Can.
Beckett, Zeilin & Co., 220 Sutter St., San Francisco, Cal.
E. H. Buehler, 134 Lake St., Chicago, Ill.
John W. Lehman, 428 Camp St., New Orleans, La.

PREPARED ONLY BY


Charles Marchand

Chemist and Graduate of the "Ecole Centrale des
Arts et Manufactures de Paris" (France)

57-59 Prince St., New York.

 SOLD BY LEADING DRUGGISTS.

AVOID IMITATIONS:

MENTION THIS PUBLICATION. 

*When the digestive and assimilative powers are lowered less variety
and less quantity of food can be tolerated, and foods that in health
are never needed, may become necessary."*

...SUCH A FOOD IS...

Extract of Plasma—"HENIUS"

A Yeast Food

EXTRACT OF PLASMA is neither a malt extract nor predigested food, but is
AN EXTRACT OF THE PROTOPLASM OF THE YEAST CELL, containing
AN ORGANIC FORM, PROTEIDS, PEPTONES, ALBUMOSES and the TONIC
HOSPHATES.

"PLASMA IS THE PHYSICAL BASIS OF LIFE" (Huxley).

In utilizing **EXTRACT OF PLASMA** the physician avoids indigestible compounds and **REVERTS TO THE FIRST PRINCIPLES OF CELL BUILDING**, provided by nature.

Extract of Plasma is especially indicated in patients convalescing from fevers and wasting diseases in general, and in all conditions where nutrition is below par.

Sufficient quantity for trial, with literature, sent on request.

THE WAHL FOOD COMPANY, St. Louis, Mo.

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

given. This third volume is the equal of the others. We know of no work so useful to the general practitioner, and so comprehensive in gathering in all that has been written, in a fair and unbiased way. Too often cyclopædias are merely a system of monographs, setting forth the views of individual writers; useful certainly, but very different from this. Here we have the literature from every worthy source condensed by competent editors, arranged chronologically, and presented so plainly and concisely that the reader has the whole subject before him in an easy retrospect.

Quain's Dictionary was for a long time a necessity in the working library. This is of the same nature, but fuller, and a worthy successor to that time-honored volume. The profession has shown great appreciation of the first two volumes of the Cyclopædia, and this will not be lessened when the third volume is received. Some of the articles are of exceeding merit, viz.: Cretinism, by Prof. Osler; Exophthalmic Goitre, by Prof. Putnam; Endometritis, by Prof. Byford, and many others. In fact, the whole volume is a mine of wealth—rather, gold that has come forth from the severest crucible. The articles by Sayre, Stelwagon and Stimson are worth the whole cost of the book. If there is one compendium which the busy practitioner cannot do without it, is Sajous' Cyclopædia.

Manifestations of Malaria in Children.—Just as we see a different form of typhoid fever in children than in adults, so we see a difference in the malarial manifestations of children as compared to the adult. In very young children the stage of chill is replaced, according to Taylor, by mere restlessness, cyanosis and cold extremities, with yawning, nausea, or possibly diarrhœa, and, along with these, various motor nervous phenomena—twitching or convulsions. In the hot stage the temperature may go high, the child becomes restless, thirsty, with flushed face, hot skin, injection of the eyes, full and rapid pulse, and severe pains in the head, back and limbs. The urine meanwhile becomes scanty and dark in color. In older children the paroxysm is somewhat similar to that seen in the adult. The significant fact, however, that should be borne in mind in the treatment of children with malaria is that, instead of the chill as we see it in the adult, we have a convulsion instead. This follows the general rule in all diseases with chills that are met with in childhood.

An interesting case of coma in a child of three years, due to malaria, is reported by Stone in the *Archives of Pediatrics* for January, 1901. The child became comatose and cyanotic; malarial parasites were found in the blood and cleared up the diagnosis; prompt use of quinine relieved the condition.

However much disposed a patient's stomach may be to refuse substantial nourishment during the extreme heat of summer, there is scarcely an instance where Scott's Emulsion cannot be readily accepted and easily retained.

SCOTT & BOWNE, 409 Pearl street, New York.

Diet in Typhoid Fever

SUPPORTING the strength of the typhoid patient without overloading the stomach or fatiguing the intestine demands the most careful judgment on the part of the physician. The selection of a diet which will nourish the patient without giving distress, causing elevation of the temperature, or inducing diarrhoea presents a problem heretofore difficult of solution. The question has been satisfactorily settled in

PLASMON

A SOLUBLE, PURE MILK-ALBUMIN

ODORLESS, TASTELESS, NUTRITIOUS AND INEXPENSIVE
REPLACING ANY AND ALL OTHER NITROGENOUS FOODS



The ingestion of PLASMON even in the early stages of typhoid fever will not cause any rise in temperature; it nourishes the patient without overtaxing the digestive organs, stimulates the natural appetite, and if diarrhoea exists PLASMON has a tendency to check it without producing constipation.

PLASMON furnishes the system with the most essential constituent of the human organism, Albumin, and in a soluble, extremely digestible and highly assimilable form. It can be administered alone, or in combination with any articles of food. PLASMON is not a substitute for Albumin, but IS ALBUMIN, pure and simple. *Physicians are invited to send for samples, and prove for themselves that the claims made for PLASMON as a nutrient are based upon established facts.*

The AMERICAN PLASMON SYNDICATE, Ltd.

24 ASTOR COURT * * * * * NEW YORK CITY

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

SURGICAL SUGGESTIONS.

Remarkable Vitality Following Injury.—Two cases of remarkable vitality following severe injury, reported in the *Lancet*, May 25 and June 8, 1901, are of interest in assisting to crystallize our surgical judgments when estimating the resistance of man to shock. The first, noted by Caddy, survived a rupture of the inferior vena cava for two and a half hours; the second, noted by Greene, survived a perforation of the stomach, diaphragm, pericardium and heart (with associated traumata) for nine hours. Were these cases extraordinary by reason of rarity, their value would consist in the lapse which presupposes the existence of the rule. But as they are merely unusual examples of the vitality of man which is daily demonstrated, whether on the operating table or in the medical and casualty wards, they may justly be permitted to sanction the courageous aggressiveness of latter-day surgery in leaving no region unexplored in life-preserving efforts; and the knowledge that satisfactory reaction may be, as a rule, expected to follow operations of the gravest character.

Gastric and Duodenal Ulceration.—A. Wilson reports four cases of gastric and duodenal ulceration in the *Lancet*, June 13. The first was a man of twenty-eight years, who was admitted with all the symptoms of an acute general peritonitis. Operation was done four hours after the onset of the first symptoms. Perforation was found in the anterior wall of the stomach about one-half inch from the pylorus. The ulcer was inverted by two rows of sutures and then a fold of omentum was stitched over it. As the contents had found their way to every part of the abdomen, a second opening was made over the pubes and irrigation practiced through it. The patient made an excellent recovery. Case No. 2 was a man of twenty-one years. Symptoms started with a sharp pain in the abdomen, which was relieved by laudanum. At the time of operation the patient would not consent to operation, which was postponed ninety-two hours after the first onset of symptoms. In this case the stomach contents had escaped through a perforation, but were well walled off by adhesions. This patient recovered. The third case was similar to the second and recovered. The fourth case was in a man of forty-eight years, who suffered perforation of the duodenum. This case also recovered.

The author uses the second lower incision in these cases, both because of better drainage and because there is not so much likelihood of hernia with two incisions to protect.

The SUPRARENAL CAPSULES in the Treatment of HAY FEVER and DISEASES of the HEART

"The Suprarenal Substance is in my experience a specific for the symptoms of hay fever, and a remedy to rapidly and surely restore the condition of the nasal erectile tissue."

"The Suprarenal Substance is an ideal heart stimulant. No other drug can compare with it for rapidity of action, strength, efficiency and safety combined."

The Suprarenal Substance should be given in 5 to 10-grain doses in capsules which are chewed and swallowed without water.

SAMPLES AND LITERATURE UPON RECEIPT OF PROFESSIONAL CARD

ARMOUR & COMPANY C H I C A G O

NEW REMEDIES.

Hypotone.—A new product, which contains a combination of remedies suitable to a variety of conditions, is found in hypotone. Advantage is taken, in the compounding of this medicament, of the great benefits that come with the administration of the reconstructant phosphorus with iron and manganese, nux vomica and coca. The basis of the preparation lies in the combination of the hypophosphites which it contains. In the very beginning of therapeusis the importance of the use of phosphorus in certain diseases of malnutrition was recognized and emphasized. We know now that the *rationale* for the use of phosphorus in a variety of conditions where it is indicated, is to be found in the physiologic-chemical axiom that phosphorus is a main constituent of bone and nervous tissues—bodily entities—than which there are none more important. It seems perfectly reasonable that phosphorus should be a necessity in tonic medication, for the very reason just indicated. It is the nervous system which demands a new tone in states of depression, exhaustion or emaciation. It is the bony system which needs new material in the common disease of infancy—rachitis. The rachitic child craves phosphorus and must have it, else no improvement in its condition can be hoped for, even though the dietary fault in hand should be corrected.

It is indeed a happy mixture which is now presented to the profession in the shape of hypotone. The sum of its usefulness can be found in the sentence, that it is useful where phosphorus is needed, and without phosphorus it is difficult (in instances impossible) to attain successful tonic medication. Hypotone, above all, will be a widely used remedy in tuberculosis, in rachitis, and in general in depressed and depleted states of the organism. It is a pleasant mixture, which promises much and which will accomplish much, for no other reason than that it is composed of remedies which fulfill certain well-known indications, and that, too, in as advantageous a way as it is possible to do so. All the well-established principles of good tonic therapeusis have been noted in the make-up of this product.

Gorham Adjustable Bed.—A mechanical improvement in invalids' beds, whereby the patient may be given a plunge bath, the mattress and linen changed without touching the patient, and surgical cases (such as fracture of the leg) can assume an upright position and support the weight of the body on the sound leg without assistance, is an advance of interest to progressive physicians. These and others are points of improvement claimed for the Gorham adjustable bed, which is equally available for use in hospital or private homes. By the mechanical construction of this apparatus the patient can be given the sitting posture for all evacuations, for reading, writing or eating, without disturbing muscular rest. By hammock attachment the patient can be raised ten inches above the bed, and the linen changed or aired; this being done by mechanical force, and so easily as to be operated by a child.

~~See~~ The value of such a bed for surgical cases, typhoid fever and inflammatory rheumatism patients, for obstetrical cases, and many other conditions too easily recognized to need reference to here, is equally a boon to physician and patient.

Interstate Medical Journal.

VOL. VIII., NO. 8. AUGUST, 1901.

Issued Monthly for One Dollar a Year.

EDITORIAL DEPARTMENT.

WARREN B. OUTTEN, M. D.,	-	-	-	-	} EDITORS.
WILLIAM PORTER, M. D.,	-	-	-	-	
R. B. H. GRADWOHL, M. D.,	-	-	-	-	
OTHO F. BALL, M. D.,	-	-	-	-	
					MANAGING EDITOR.

Address all communications, news of medical interest, subscriptions, etc., to the INTERSTATE MEDICAL JOURNAL CO., COMMERCIAL BUILDING, ST. LOUIS, MO.

INCREASE OF CANCER IN MASSACHUSETTS.

The recent Shattuck lecture delivered by William F. Whitney before the Massachusetts Medical Society, on "The Alleged Increase of Cancer in the State of Massachusetts," deals with the subject from a careful analytical examination of the statistics on cancer in Massachusetts during the past fifty years, together with statistical tables showing the prevalence of cancer in the New England States, in England and Wales, and in Austria. The lecturer first explained what is meant by "mortality" of a disease in one place as compared to another—*i. e.*, the number of persons who have died during a year with a certain disease out of a given number who were alive at the beginning. The total number is usually 1000. Then, again, comparison is made between the total number dying of one disease and all those dying of all other diseases: this is called the death ratio, and is expressed in per cent.

From the sum of all the figures cited and references made, it can be said that if death from cancer should go on at the apparent geometrical rate of increase of the past fifty years, in two and a quarter centuries every person over thirty years would die from that disease. This rate, however, is probably only arithmetical at its worst. The increase is probably due to better diagnosis and registration, and until the ratio of deaths over thirty years has reached eight or nine per cent., which is shown by autopsies to be the true rate for cancer, it is not justifiable to speak of the increase as inherent in the disease itself. The compiler further asserts

that a comparison of the rate for Massachusetts with other places shows it to be about the same, with greater variation between the males and females than is the case in Austria, which is remarkable for the correspondence between the two sexes.

According to the writer, there is only a statistical increase of cancer in the State of Massachusetts, and it remains for other investigators later on to demonstrate whether this is something more than a statistical increase or not. Until these figures are forthcoming, nothing absolute can be said.

CHEMISTRY OF THE BACILLUS TUBERCULOSIS.

It is well-known to all that the bacillus tuberculosis is an "acid-fast" bacterium—*i. e.*, when subjected to staining with carbol-fuchsin, for example, and then decolorized with acid solutions, it retains the red color of fuchsin. The acid-fast characteristic of the bacillus tuberculosis is responsible for its ready differentiation from other similar shaped bodies. A recent investigation into the chemistry of the tubercle bacillus is that reported to the Pathological Society of London by Drs. W. Bulloch and J. R. McLeod. The research was undertaken chiefly to ascertain to what chemical substance these bacilli owed their peculiar "acid-fast" properties. In confirmation of the work of Aronson, they found that after thoroughly extracting the bacilli with alcohol-ether, containing one per cent. hydrochloric acid, the acid-fast properties of the bacilli disappeared. The extract on cooling deposited a white scaly precipitate. This was separated and found to stain deeply with carbol-fuchsin, retaining the stain even after treatment with seventy-five per cent. sulphuric acid. The extract also contained a lipochrome, a considerable amount of fatty acid, and only a trace of neutral fat. The extracted bacilli were then treated at sixty degrees C. with between two and three per cent. caustic potash until all proteid had been removed. The residue was found to contain about three and five-tenths per cent. nitrogen, and to yield on hydrolysis a body capable of reducing cupric salts in alkaline solution. They suggested that the sediment might therefore consist, in part at least, of chitin. Chitin is a white horny substance, which is found in the other shells of insects and other crustaceous animals. Sufficient material has not yet been prepared to decide this question. Ruppel and others suggested that the acid-fast properties of the tubercle bacillus might be due to chitin, since it has been observed that the substance was very "acid-fast," and also that certain fungi contained it. Bulloch and McLeod, however, found that chitin did not retain the fuchsin stain when the usual procedure was adopted, but that by leaving the chitin in the stain for twenty-four hours it was fast, even to fifty per cent. sulphuric acid. They found also that the wax-free residue of the bacilli was acid-fast after twenty-four hours' staining.

ULCER OF THE STOMACH CAUSED BY THE DIPHTHERIA BACILLUS.

It is now well known that the Klebs-Loeffler bacillus can cause manifestations other than those found in the fauces and naso-pharynx. Diphtheritic infection of wounds is well known, as is diphtheritic vaginitis. Aside from these extra-faucial lesions, we have heard but little concerning the pranks of the diphtheria bacillus when it chances to poach upon other preserves in the human organism. Schoedel, in the *Muenchener medicinische Wochenschrift*, June 26, 1900, refers to a case of fibrinous inflammation of the gastric mucous membrane, due to the diphtheria bacillus, in the case of a child who died of faucial diphtheria without any gastric symptoms.

A most interesting case of gastric ulcer caused by the diphtheria bacillus is recorded by William R. Stokes in the *Johns Hopkins Hospital Bulletin* for July, 1901. The patient was a young man picked up on the street, suffering with well-marked faucial diphtheria. The membrane on the tonsils disappeared after the injection of antitoxin, but on the sixth day of treatment his temperature became subnormal, accompanied by gastric pain and hyperesthesia. He died on the tenth day. By autopsy the stomach showed an ulcer two and a half ccm. by one ccm. near the pylorus in the most dependent part of the greater curvature of the stomach. It was covered with a dark yellow membrane, in places almost black. Cultures showed the presence of the Klebs-Loeffler bacillus.

The case is highly interesting in view of the fact that it has been maintained by some authorities that a true diphtheritic involvement of the stomach is well-nigh impossible, on account of the fact that the gastric juice will take care of and destroy diphtheria bacilli in case they are swallowed. This case showed this view to be erroneous. It may be well for clinical observers to take heed of this circumstance, as the diphtheria bacillus may bear an important etiologic relationship to gastric ulcer.

CONCERNING THE BACILLUS AEROGENES CAPSULATUS.

We have frequently referred to the bacillus *aerogenes capsulatus* in these columns in its relations to pneumatopathology. The most complete dissertation in this regard is found in William H. Welch's admirable Shattuck lecture of last year, in which he goes thoroughly into its biological and morphological characteristics and its disease-producing behavior. Before Welch's extensive work more than one case of emphysematous gangrene had been incorrectly ascribed to the workings of the bacillus of malignant edema. It seems now that the bacillus *aerogenes capsulatus* of Welch is the organism which will be found to be the factor in all cases of emphysematous gangrene in man.

Besides the frequency of cases which are being reported from time to time—about sixty so far—one is struck with the alarming fatality accompanying such infections. About one-half of the cases reported have ended fatally. Two more cases of emphysematous gangrene due to the bacillus

ærogenes capsulatus have been recently reported by L. M. Loeb, in *American Medicine*, July 27, 1901. In one of these cases, which ended fatally, the patient disclaimed having had a skin abrasion, the attack beginning with pain in the left shoulder and afterwards showing swelling, emphysema and pustulation of the left arm. The second case had its origin in a traumatism, in a boy of nine years. The knee was injured and developed emphysematous gangrene. Multiple incisions were made, leading to permanent injury of the joint, but the boy recovered from the general infection.

PEMPHIGUS VEGETANS (?) IN AN INFANT.

In *Pediatrics* of June 15th appears an interesting article entitled "An Eruption Resembling Pemphigus Vegetans in an Infant," wherein the writer, after stating the clinical findings in the case, excludes syphilis on the following grounds: "First, entire absence of syphilitic history and no traces of syphilis in the parents; second, the child was born with a healthy skin, and showed no eruptions whatever the first four months of life, the only symptoms of disease being indigestion and emaciation; third, at present we find no mucous patches in the mouth, no patches or fissures about the commissure of lips, and no lesions on palms and soles, and no adenopathy." The diagnosis of pemphigus vegetans is made on the strength of the pemphigoid eruption following bronchitis, and accompanied with papillary hypertrophy.

It seems that the writer has fallen into one or both of two common errors in the diagnosis of skin diseases in children: firstly, in laying great stress upon the statements of parents regarding their own previous skin diseases, since half of the poorer classes pay but little attention to such matters; and here be it remembered that a child born syphilitic may present the first symptoms months or even years after birth, as in syphilis tarda. A vesiculo-pustular eruption, often sparing palms and soles, occurring between the third and fifth months, is not uncommonly the first manifestation of syphilis, mucous patches and fissures often being absent in these attenuated cases, although they are apt to present themselves during any subsequent outbreak of the disease. Thus it would appear that the writer is not justified in excluding syphilis on the grounds given, especially since noting the results of mercurial baths, which give often most gratifying and striking results in the treatment of syphilitic children, and which, according to Baginsky's experience, is the best and quickest method of producing results.

The second error referred to is the common practice of calling every bullous eruption a pemphigus, making this very rare disease comparatively common, whereas impetigo contagiosa bullosa, very often the offender among poorly nourished infants, is classified among the rarer diseases of the skin. Close study of the course of these bullous eruptions, noting the results of exposure, and lastly proper attention to the bacteriological aspect, should soon assign these diseases to their proper places in the category of skin diseases.

A. F.

THE HOME-TREATMENT OF TUBERCULOSIS.

The reaction from climate-hunting is upon us. The favorite prescription of the fathers, "take creosote, cod-liver oil and go west," is almost a memory. The protests of unselfish and careful physicians in Colorado and California against the indiscriminate inpouring of the consumptive throng have been heard. The deductions of superintendents of sanatoria and advocates of better home treatment are being read.

Already these protests and deductions are influencing the minds of the profession, and physicians everywhere are now studying the indications in each case, and are asking: "What more can I do, not only to prolong life, but to save it?"

The thoughtful essays from Babcock, Bartlett, Elliot and many others during the past year, advocating open-air life, so far as is possible, with home treatment, in which rest, good food, hydrotherapy and the greatest comfort can be assured, have set men to thinking that perhaps there may be something better than routine medication and—shall we say it? indifference if not neglect.

The same kind and practical thought that has stamped out small-pox, robbed diphtheria of its terrors, and limited the bubonic plague, will find a better way of controlling "the great white plague" in the community and in the individual than by dispersing its victims over the length and breadth of the land.

Less rapid than diphtheria, less innocuous than small-pox, but more wide-spread than either, its control and limitation is the question of the hour.

THE MEDICAL DIRECTOR OF THE FAIR.

The daily papers have been constantly keeping before the public the importance and the possibilities of the appointment of the Director-General of the Fair. Very little has been said regarding the selection of the Medical Director. A few candidates have been "looking after their fences," while the most of the profession are apathetic.

We believe this office is second in importance only to that of the Director-General. As we have before stated, the hygienic and climatic conditions are unique in this case. A summer like the present will present many new and anxious problems.

Many of these problems have to do with the care of those who will suffer from the intense heat—worn-out by the exigencies of travel and sight-seeing. Then all of the medical and surgical necessities will be present. Scarcely less important will be the ability and tact of the Medical Director in suppressing unfounded rumors, and commanding confidence through the press in the face of any emergency.

It is more than possible that some time during the exposition season there will be a scare—a dysentery, sunstroke, bad water, or small-pox. Even if unfounded, it will do untold injury to the fair. In such an emer-

gency the Medical Director must not only be a good practitioner, but a man of tact and control.

We ask that the appointment be made with the same care that is being used in the selection of the Director-General. He should be a man of experience, a man of executive ability, a man who has the confidence of the best members of the profession, one who combines knowledge and wisdom. It is an office which should seek the man. And we are unwilling to believe that personal pulls, drummed-up influence and bargaining will receive consideration in the selection. Our directors will give us a good, strong, useful, capable man.

KOCH'S EDICT.

Robert Koch, he of tubercle bacillus fame, has recently delivered an address on tuberculosis before the British Congress of Tuberculosis that has been almost as widely discussed as was his original paper on the cause of tuberculosis in 1881. At that time Koch came out with the cause of consumption—a discovery than which there is hardly a superior in the history of medicine. At this time Koch advances statements that are hardly in accord with what years of rational thinking has led most scientists to believe. In the present paper, the contents of which have unfortunately reached the lay press, as usual, in distorted form, Koch advances the idea that bovine tuberculosis is not communicable to man, and offers experiments to show that human tuberculosis is not capable of being carried to cattle. It seems that Koch carried on experiments for a period of six months or more, feeding cattle (pronounced free of tuberculosis by means of the tuberculin test) with human tuberculous sputum and even injecting them hypodermically with human tubercle bacilli in sputum. In none of these experiments was he able to produce tuberculosis in cattle. He concludes from this that it is impossible for cattle to contract tuberculosis from man. This, he affirms, proves the non-communicability of human tuberculosis to cattle. In proof of the non-communicability of bovine tuberculosis to man he, of course, has no animal experiments. He cites in proof of it, however, that there are but rare instances on record of the finding of primary tuberculosis of the intestinal tract in man—a finding which should be common were it possible to contract tuberculosis from cattle through the agency of either tuberculous meat or milk.

Koch argues *in toto* for the duality or the tubercle bacillus. He believes that there is a specific tubercle bacillus which causes human tuberculosis and another distinct pathogenic bacillus that causes tuberculosis in cattle. What shall we say in criticism thereof? We have for years been taught to regard meat and milk from tuberculous cows as dangerous to man, and now are practically told that such meat and milk, tainted though they may be by a *bovine* bacillus tuberculosis, are harmless and may be ingested with relish and without fear by man.

In rebuttal thereof, it may be said with all due respect to the one-time great Koch, that the day has long since gone by when medical men accept in one gulp the dicta of one man, however great his prestige in science may be. We contend that Koch's experiments are not sufficiently extensive to justify him in making the sweeping assertions contained in his address. It may be well to recall Koch's insecure position when he launched his tuberculin and T. R. It may be well to recall his rather insecure position in regard to his contribution to the malaria question, and the charges made by the Italians of theft by the self-same Koch of ideas obtained from them while he was their guest, and published afterwards by him as original observations. Again we say, admitting Koch's great work on the etiology of consumption, we must accept whatever observations he may make with caution and with reserve. He has failed to prove that infants do not contract tuberculosis from tuberculous milk. He has failed to prove that man has never contracted a case of tuberculosis from the ingestion of tuberculous meat. His experiments are inconclusive. He has no justification in making the sweeping statements alluded to. Until more conclusive investigations are made, it is criminally wrong to allow the community to consume tuberculous meat and milk with impunity. It is indeed unfortunate that Koch's words have been quoted in the lay press, for the public are only too willing to accept as gospel truth what this supposedly infallible Koch has fearlessly asserted. Even though he were that one-time great Koch, we would still deny the truth of his conclusions and say "hold off until more work be done."

THE VALUE OF THE COLON BACILLUS AS AN INDEX OF SEWAGE POLLUTION.

The bacillus coli communis is a normal inhabitant of the intestinal tract of man. It is also found under normal conditions in the intestinal tracts of the lower animals. The colon bacillus of animals is in no way distinguishable from the colon bacillus which inhabits the gastro-intestinal tube of man. Yet bacteriologists have been content to find the colon bacillus in water and to affirm that such water is contaminated by human sewage. Where is the line of reason in this? It is positively true that the search for the colon bacillus constitutes the principal grounds for testifying, on the part of the bacteriologist, that he has undertaken a careful examination of water and finds it polluted by human feces, in case he finds the colon bacillus present. It is lamentable that this uncertain position has been taken by some of the active workers in water analysis. While it is true that the colon bacillus *may* find its way into a water supply from human feces, it is also true that it may be found present and yet may not have come from the intestinal tract of man or any other animal.

Among the first to call attention to the fact that the colon bacillus does not necessarily come from the human intestinal tract was Prof. Kruse. As early as 1894, this distinguished bacteriologist pointed out the error of

calling the bacillus coli communis an index of sewage pollution. Kruse said that the colon bacillus is found everywhere, in the soil, in the air, in water however pure it may be, provided enough of the water be taken for examination. Later, Weissfeld, an assistant of Kruse's at the University of Bonn, published his report on an analysis of fifty-six different water supplies, including springs in the forest, wells protected by every care against sewage pollution, etc. Weissfeld found the bacillus coli communis in every case, whether the water was good or bad, and he inoculated animals with the cultures of the colon bacillus which he found. In some cases this colon bacillus was pathogenic for guinea-pigs, in others it was not so. There was no way of differentiating the colon bacillus which came from "bad" water from that which came from "good" water, in its behavior to guinea-pigs. In other words, a colon bacillus from a "bad" water would prove innocuous to guinea-pigs, while one from a "good" water would kill the pig straightway.

Thus it can be seen that the colon bacillus *is not* a positive index of sewage pollution, for the reasons stated above. Its presence in a given water supply *may* mean that the water is contaminated by human feces, but would not necessarily prove that supposition. The absence of the colon bacillus from a water supply, then, would mean that that supply is uncontaminated. Much more reliance is to be placed on the chemical analysis than upon the bacteriological analysis in getting the sum of the purity or impurity of the given water. The presence of the nitrates and nitrites in goodly amounts is of great significance in estimating the possibility of sewage contamination, if at the same time there be present a high percentage of ammonia.

To our mind, Professor Percy Frankland, who, as is well known, has had a large experience in dealing with micro-organisms in air and water, gives a good idea of the status of bacteriologic methods of water analysis in these words: "The detection of specific pathogenic bacteria in drinking water is now known to be beyond the range of practical politics, and the search for such bacteria is, in general, only carried on in deference to the special request of the layman, the uninitiated, or the hopelessly ignorant, whilst it cannot be repeated often enough that any feeling of security which may be gathered from an unsuccessful search for pathogenic bacteria is wholly illusory and in the highest degree dangerous. By far the most important service which has been rendered by bacteriology is the means which it affords of controlling the efficiency of filtration and other purification processes. The slightest irregularity or defect in the process of filtration is at once laid bare."

CLINICAL LECTURE.

LOCOMOTOR ATAXIA.¹

BY D. R. BROWER, M. D., of Chicago, Illinois.

Professor of Nervous and Mental Diseases, Rush Medical College; Professor of Diseases of the Nervous System and Clinical Medicine, Northwestern University
Women's Medical School, etc.

GENTLEMEN:—This patient is forty-eight years of age. He was admitted to the hospital two months ago. His father died at the age of ninety-four, and his mother at the age of eighty-three. He has been a heavy drinker. Two and a half years ago he took the Keeley cure, and since then he informs us that he has had no taste for liquors or for cigars. Of course, the effect of the Keeley cure in taking away his taste for liquor must necessarily be purely psychical. Indeed, the only advantage in the so-called Keeley cure is the psychic part of it; the rest of it, in my opinion, is injurious, as the subsequent history of this man shows. He has had none of the usual diseases of childhood. He has had delirium tremens. He denies having had either gonorrhea or syphilis. We cannot always believe patients in this particular, but I have reason to believe that this man is truthful in his statements, when he informs us that he has not had any venereal disease. Remember that. Just after taking the Keeley cure, three years ago, he began to have pains in the lower extremities. These pains were both localized and diffused. They were sharp and lancinating in character. They were attributed to sciatica. Subsequently he began to have trouble in urinating, shortly after which the urine would pass involuntarily. Some time after he had taken the Keeley cure, while traveling, he was thrown violently against the door of a railroad car in a collision, and some days thereafter the feet and ankles began to swell. The patient could not judge distance very well; he would take a misstep quite frequently. He could not go down stairs easily. At about this time pains began in the shoulder, abdomen and legs. He had attacks of vertigo. Up to the time of taking the Keeley cure he regarded himself as in fairly good health, except the disturbance that arose from the use of alcoholic stimulants. His pupils are unequal; they do not respond to light. They respond to accommodation, especially the larger pupil, but the smaller one makes a very feeble response. In addition to a history of pain we have the Argyll-Robertson pupil. I will ask the patient to cross one leg over the other so that we can test the patellar tendon reflex. There seems to be no patellar tendon response on either side. You should never reach a conclusion as regards the absence of patellar tendon reflex until you have instructed the patient

¹A Clinical Lecture delivered at the Cook County Hospital and reported for INTERSTATE MED. JOURNAL.

regarding re-enforcement by having him pull vigorously on the hands with the eyes closed. Do not be satisfied until you have struck the bare patellar tendon, otherwise you may be deceived. Striking the bare tendon with the re-enforcement, we get no response. If you fail to get a response, test the muscles; see if there is any miotatic irritability in the femoris muscle. I get good response from the muscle at a certain point, so that the muscle has contractile power, but there is no patellar tendon reflex. Having determined the absence of patellar tendon reflex, it is important to find out the condition of the plantar reflex. By irritating the sole of the foot, if there is a plantar reflex we get a response, but we do not seem to get it in this case. The muscles of the leg and of the thigh have reflex power, yet there is absence of patellar tendon reflex.

This patient has an unusual degree of ataxia. Even with a very broad base he is unable to stand. From the symptoms we have elicited, and the unusual degree of ataxia, we may safely say that here we have to deal with what is known as *tabes dorsalis* or *locomotor ataxia*.

I have brought this patient into the amphitheatre for two or three reasons. *First*, because we may rest assured that in his case there is an absence of syphilitic history; there has been an antecedent history of alcoholism extending over several years, and he has taken the Keeley cure, which in my opinion is a very destructive cure. I have met many instances of insanity as the result of the Keeley cure. I have seen cases of myelitis as the outcome of the Keeley cure; also, cases of neuritis as the product of the Keeley cure, and here we seem to have a case of *tabes dorsalis*, the product of the Keeley cure, added on to alcoholism. This man was before the class a few months ago, on account of terrific gastric crises. He was suffering intense pain. It was this pain that brought him to the hospital first. The intense pain was more or less constant, and he had persistent nausea, with some vomiting.

There are some other signs of locomotor ataxia to be noted. I have previously told you that it is your bounden duty to recognize this disease in the preataxic stage. No student is justified in watching such a case as this for a long period of time without making a diagnosis. When these patients are seen in the beginning, do not let them pass as instances of sciatica. Do not pass them off, as they frequently are, as rheumatism. A patient came into my office to-day complaining of rheumatism, and said he wanted to be treated for it. He had made a diagnosis of rheumatism himself, for which he wanted treatment. It was a case of locomotor ataxia. There was nothing in his family history which pointed to rheumatism, nor in his antecedent history. People who have rheumatic diatheses, as a rule, have attacks of inflammatory rheumatism in early life. They usually get rheumatism before they reach the age of forty-five or fifty years. Rheumatism is essentially a disease of early life, and when patients come to you with aches and pains which they have diagnosticated

as rheumatism, you will find in the great majority of cases they are not rheumatic at all.

There are other symptoms of locomotor ataxia that are worth looking for. One of them is a sign to which I have previously directed your attention. It is not pathognomonic, but simply an aid. I refer to ulnar analgesia. If any member of the class will rub his ulnar nerve in the ulnar notch in the manner I show you (illustrating) he will find that it will cause considerable pain. The facial expression of this man shows that I am not making a painful impression. It is true he feels the pressure, but I do not inflict any pain. Along with ulnar analgesia we very frequently find marked diminution in pain sense throughout the whole territory. I am now pricking the patient over the distribution of the ulnar nerve, and while he feels the contact of the pin, he has no pain sense. There is analgesia in the area of distribution of the ulnar nerve. I presume the same is true of the other side. We will see. I find that he has loss of pain sense in the area of distribution of the ulnar nerve on the other side. This is a great aid in diagnosis.

Then we have Fraenkel's sign, which is an aid also in diagnosis. It has helped me materially in more than one case. It is this: If you will extend the thigh at right angles to the body you can bring the leg up in a perfectly straight line. This cannot be done to any member of the class without causing intense pain. The usual angle that the leg makes in that position is not manifest; the muscles are in a hypotonic condition. In other words, there is a lack of muscular tone. In this case the leg can be completely extended on the thigh, the thigh being at right angles to the body.

There is another interesting sign which is present in this case, and all these signs are aids in diagnosis. It is this: In very many of these cases there is an exaggeration of the abdominal reflex. We get a very lively or exaggerated abdominal reflex in this case. This case is typical of locomotor ataxia well advanced in the ataxic stage.

Another reason for bringing this patient here was to talk to you about the muscular exercise treatment of these patients, better known as the Fraenkel treatment. Such a patient as this, with a marked degree of ataxia, should have two parallel bars between which to stand. With the assistance of these parallel bars he should practice every day, standing with his feet as close together as possible. Every other day he should go through the same exercises with his eyes shut. Of course, it takes considerable practice. He should try to stand on one foot with his eyes open, and then do the same thing with his eyes closed. He should be instructed to go through these exercises with the eyes open first. He should be directed to stand with his feet as close together as possible until he can count ten, and then do the same thing with his eyes shut. Later on he should be instructed to stand on one foot until he counts ten, twenty, or thirty, and increase the time from day to day; then stand on the other foot until

he can do the same thing. After exercising in this way he should attempt to walk for some distance, increasing the distance from time to time. By carrying out the system of exercises recommended by Fraenkel, you will be astonished to see how these patients improve, and how they regain their power of co-ordination. In patients who have less ataxia than this man the difficulty of carrying out these exercises would not be so great. Those are some of the exercises for the lower extremities.

For the upper extremity we will have him touch his nose. He keeps at this until he touches it with the index finger of one hand, and then with the other hand, for ten or more minutes. Have him do it with the eyes shut. Persistence and perseverance in executing these various movements will result in great improvement in the power of co-ordination. I give these patients about twenty-four exercises, and these can be varied as desired. I have a list of probably thirty or forty exercises, and I mark twenty or twenty-four for each patient, emphasizing those exercises that seem to be indicated, according to the degree of inco-ordination. These Fraenkel exercises have been a wonderful advancement in the treatment of locomotor ataxia. Every day this man ought to go through this series of exercises, being careful not to carry them to fatigue. He should change the schedule a little from time to time as he gains the power of co-ordination and add other exercises, such as the Fraenkelinic series would indicate.

Locomotor ataxic patients need alteratives and tonics. In this man's case, in the absence of a syphilitic history, there is no necessity of pushing the alteratives very much. But a moderate use of the iodides, four or five grains three times a day, and the use of tonics, avoiding strychnia and nux vomica, would doubtless prove very beneficial. Erb taught us years ago that the progression of locomotor ataxia was made more rapid by the use of strychnia and nux vomica. Phosphite of zinc, preparations of phosphorus, syrup of hypophosphites, are the best remedies to use in this class of cases, with attention to elimination by the bowels and by the skin. Look out, too, for elimination by the kidneys. An admirable remedy to stop the pain in this man's case is the hydrobromate of hyoscin. I do not like to give these patients morphine, for the reason that it is comparatively easy to get them into the morphine habit. Hydrobromate of hyoscin, 1-100 of a grain, three or four times a day, continued for a week and then stopped, will do much toward lessening the pains in this man's case, and I have not heard of any one yet who has contracted the hydrobromate of hyoscin habit.

ORIGINAL ARTICLES.

THE GENERAL PRACTITIONER AND OPHTHALMOLOGY.

BY JOHN GREEN, JR., M. D., of St. Louis, Missouri.

THE ophthalmic surgeon has too frequently to deplore the extreme unintelligence which often characterizes the treatment of ocular disease by the general practitioner. The latter, engrossed in the multifarious problems concerned with disease in general, has little time, and perhaps less inclination, to study the minutiae of ophthalmic diagnosis and therapeutics; and it were an ill grace on the part of the ophthalmic specialist to cavil at the short-comings of his colleague in general practice, were it not that the latter, in the presence of disease of the eye, often throws common sense and his knowledge of pathology to the winds, and looks back to some miserable routine which comes to his recollection, dim and distorted, from the course in ophthalmology of his undergraduate days.

Undoubtedly the commonest delusion is the general notion that the sulphate of atropia is *indicated* in all forms of ocular disease. It is of very frequent occurrence that a patient suffering from a simple acute conjunctival catarrh comes to the oculist with widely dilated pupils. On inquiry, the fact is elicited that the family doctor had used "drops," shortly after which the patient discovered that he could not see near objects distinctly. Considerably perturbed and with a well-developed notion that he is rapidly growing blind, the patient is greatly relieved to find that, with the aid of plus spherical glasses, he can still see to read. The oculist has then to treat the simple catarrh plus the unnecessary mydriasis.

Of much graver significance are those unfortunate diagnostic blunders leading to the employment of atropia in conditions of glaucoma. It is not always possible even for the most experienced to affirm that a given case calls for the employment of a mydriatic; and in an ambiguous condition the mydriatic will be withheld until a possible glaucomatous element can with certainty be eliminated. On the other hand, the very uncertainty of the diagnosis will, in all probability, lead the general practitioner to employ atropia in the first instance, on the vague (and erroneous) theory that the drug is a "specific" in ocular disease, very much as mercury is a specific in syphilis. On the dire results of such haphazard therapeutics it were superfluous to dwell. Suffice it to say, that many an irremediably blind eye has been made so by this hit-or-miss method of employing a most valuable (and dangerous) therapeutic agent.

An opinion that is quite generally held by the laity, and is unfortunately shared in by many of the profession, is that a sore eye is very much of the

nature of a boil, and should be "brought to a head as quickly as possible." This fallacious belief, leading to the prolonged and indiscriminate employment of poultices (bread, milk, flaxseed, tea-leaf, etc., *ad infinitum et ad nauseam*) should be condemned in the strongest terms. In the presence of a corneal abrasion, poulticing (of the sort above alluded to) will almost inevitably lead to infection, with probable slough of the cornea, and possible panophthalmitis. The desired (?) result is thus obtained: the eye is "brought to a head" with a vengeance; and however useful the stump may be as a basis for an artificial eye, its function as an organ of vision is forever destroyed. The writer does not mean to affirm poultices have not a very valuable place in ophthalmic practice, but they should be used with extreme caution, and only when the patient can be continuously observed.

The use of plumbic acetate collyria has so frequently been condemned by the best ophthalmic practitioners, that it is somewhat discouraging to enumerate now and again a case of lead deposit on the cornea. We are credibly informed that sugar of lead is harmless provided the cornea is intact; but is it safe for the general practitioner to assume in a given case that the cornea has not become involved? Very minute epithelial denudations can only be positively discovered by painstaking inspection with the aid of oblique illumination and a strong convex lens, and sometimes require for their development a differential staining with fluorescein. It is not to be expected that the general practitioner will have at his command the above adjuncts to a correct diagnosis, and it were far wiser that he should employ astringents which have not that very serious drawback and are of equal therapeutic value.

Every physician, whatever his particular line of work may be, has been called upon, at one time or another, to remove a foreign body from the eye. If the fragment is loose in the conjunctival sac or lies superficially beneath the upper lid, no particular difficulty is encountered. A few strokes with a camel's-hair brush, or tooth-pick wrapped with absorbent cotton, will sweep away the offending particle. If the particle be imbedded in the cornea, it should be dug out with an ordinary foreign body spud, or a sickle-shaped knife-needle. Too often, however, the physician does not possess these very necessary instruments, and endeavors to make his sharp-pointed bistoury serve the purpose. With this instrument he will probably succeed in scraping off much of the epithelium along with the foreign body. He should bear in mind that neglect to deal with these eyes antiseptically for several days subsequent to the injury may lead to the development of an ulcer. A very useful anesthetic in these cases is holocain hydrochlorate in a one per cent. solution, which has the advantage over cocain that it does not dilate the pupil.

In concluding this short and necessarily incomplete catalogue of ophthalmic sins, it might be well to bestow upon the general practitioner the odium which he has rather skillfully evaded (but which justly belongs to him) for the mistaken but sadly prevalent belief that convergent strabis-

mus in young children should be allowed to go untreated until the age of puberty.

Unquestionably, this opinion is the outcome of woeful ignorance of the conditions of refraction underlying the trouble. More than eighty-five per cent. of the cases of convergent strabismus in young children are due to hypermetropia (Weekers). Even an elementary knowledge of the physiological connection between accommodation and convergence, and an appreciation of the fact that an increase in the power of accommodation (as in moderate hypermetropia) is inevitably accompanied by an increase in the degree of convergence, would save many a physician the expression of disastrous and misleading opinion.

The generally given advice—"delay treatment until the child is older"—is absolutely pernicious. Countless children have been condemned to surgical operation, with probable sacrifice of binocular vision, whose squint should have been absolutely controlled by the immediate application of appropriate glasses. Even squint occurring subsequent to diphtheria not infrequently proves to be of the ordinary type, and not dependent upon paresis of the ocular muscles.

The only safe course for the physician to pursue is humbly to confess his own inability to express an opinion, and admonish the immediate seeking of skilled ophthalmic advice.

EROSIONS OF THE STOMACH.

BY M. D. SCHMALHORST, M. D., of St. Louis, Missouri.

THE most significant point in making a diagnosis of erosions of the stomach is the finding in the wash water. The stomach is washed out in the morning when the patient is in the fasting condition. If the return water is examined carefully a few pieces of mucous membrane are found, generally from one or two to four or five; these vary in size from a mere speck no larger than a pin head, to the size of a large split pea. They can be best recognized when the wash water is poured into a white flat-bottomed dish, where they look like small blood-clots against a white background. In cases of erosions these small pieces of the mucosa are always found in the lavage water, if lavage is done when the stomach is empty.

Such superficial exfoliations of the mucous membrane of the stomach are often found at the post-mortem table. The pathological anatomy of these exfoliations has been pretty thoroughly inquired into. In speaking of "Ueber geschwürige Processe in Magen," D. Gerhardt uses the following terms: "Sections made of erosions as a rule show that at the base of the ulcerations almost the entire lower half of the mucous membrane is

still preserved. In the epithelium of these remaining glands nothing remarkable can be discovered; at the sides the glands become longer; the first ones that are intact usually curve themselves over the defect and partly cover it. The recovery seems to take place by the simple after-growth of the gland remnants."

Very little work upon the clinical aspect of erosions has been done. It is only within the last few years that observers have grouped enough symptoms to make the diagnosis of erosions of the stomach. Chronic gastric catarrh is likely the cause of nearly all erosions. In rare cases the etiology is not apparent.

The symptoms of erosions are pain, which is not constant, more or less emaciation, and weakness. The pains come on when food is taken. The character of the food has nothing to do with the pains at all. After an hour or two they pass away. The weak feeling is accentuated when the pains are felt, and reaches the climax soon after meals. At times the patient is unable to accomplish anything for a number of days. A better feeling is experienced so long as absolute quiet is indulged in.

In nearly all cases of stomach diseases, if lavage is done, small pieces of the mucosa appears in the wash water. Such pieces are most likely to appear if there has been considerable coughing during the use of the tube. Blood is seen in such cases as these, and the return water will be tinted faintly or it may assume a very pronounced color, due to the amount of hemorrhage present. In instances of this kind the tube is responsible for the torn-off pieces. In coughing the stomach contracts rather violently against the end of the tube, which cures off a piece of the membrane. Some hemorrhage naturally takes place. Such pieces are not to be confounded with those from an eroded stomach. Macroscopically the curettings are thicker and sections show the entire glands of the mucosa.

In erosions the peeling off takes place some time previous to lavage; and from the fact that these pieces are continually found when the stomach is washed out in a resting condition, leads one to believe it goes on continually and has nothing at all to do with the act of lavage.

It is not certain whether the same area is always involved or whether the exfoliation takes place here and there, each time at a different one. It is more than likely that the pieces come from a new field each time; for in the process of healing, even of a superficial wound, more or less scar tissue is left behind; this is more resisting and less likely to exfoliate than new areas.

At first thought one would think that in cases of erosions of the stomach there would be a direct cause for the development of ulcer; yet there does not appear to be any relation whatever between ulcer and erosion. Patients giving a history of erosions of long standing do not give history of any symptoms leading one to suspect ulcer.

The treatment of erosions limits itself to local applications. Silver nitrate applied directly to the mucosa acts in a very happy manner. This

is applied by use of the spray. About 10 c. c. of a 0.1 to 0.2 per cent. solution can be used. The beneficial results accompanying this method can be well illustrated by citing the following case:

Mr. H. P., aged seventy-three, has had stomach trouble two years almost constantly. Has had periodical attacks for the last twenty years. Pains very irregular, appearing after meals. The pains are not acute, but produce a general soreness over epigastrium. They may last a week or two, and during this time there is scarcely any appetite at all. Bowels irregular, generally constipated. Whole abdomen feels full; no inclination to be active. Physical examination negative.

April 26, 1901, test breakfast was given; after an hour an effort to draw it off was not successful. April 28th test meal again given and sufficient gastric contents taken off to filter 1 c. c. This showed total acidity 20. No free HCl. and no lactic acid. The stomach was washed, bringing out the rest of the test meal. Up to this time no diagnosis was made. May 2d lavage was done upon an empty stomach, when four small pieces of membrane were found. The same thing took place the next morning. May 6th stomach was washed and 10 c. c. of 0.15 per cent. nitrate of silver solution sprayed directly into it. Two days later this treatment was repeated. Patient reports great improvement. After four treatments nothing appeared in wash water. Was given twelve treatments and discharged feeling well in every particular, and has remained so up to the present time. Later chemical examinations showed increased acidity, but no free acid has ever appeared. Rennel and pepsin were both present. He was given fifteen drops of dilute HCl. after meals.

No special directions were given to diet. Heavy meals, salads and pastries were not advised. HCl. was not given with any intention of assisting in the cure of the erosions, but to help proteolysis. In most cases of erosions the acidity is very low.

The Limit of the Pupillary Reaction in Chloroform Narcosis.—Schleich says that in giving chloroform the pupil must be watched. It becomes smaller as the patient goes under the influence of the drug. Just enough chloroform should be given to keep the pupil a moderate size. Flockemann describes the first sign that the patient is coming to himself as follows: Though the moderately contracted pupil will react when one eye is opened, yet should both eyes be opened, the pupils become suddenly contracted. This he calls the limit of the pupillary reaction to light in chloroform narcosis. If the patient is still under the influence of the narcosis, a few more drops of chloroform are added slowly. If he is almost awake, they must be dropped on quickly. When the corneal reflex remains throughout the anesthesia, enough chloroform should be given till it disappears. Flockemann believes that the patient will be better off should this phenomenon be watched—*Centralblatt fuer Chirurgie*, May 25th.

INTESTINAL OBSTRUCTION FOLLOWING ABDOMINAL SECTION.

BY EDWARD WALLACE LEE, M. D., of St. Louis, Missouri.

IN DISCUSSING this subject I shall endeavor to confine my remarks to those conditions of obstruction which occur after an abdominal section not made to relieve obstruction. Of course, there are few conditions demanding abdominal section but what more or less obstruction exists.

After the section not only the patient but the operator is relieved if the patient has a free intestinal evacuation, and that is what we look for soon after the first day after operation. If the bowels do not act within thirty-six hours after abdominal section and no gas is passed, we at once begin to investigate for the cause of delay, for in ninety per cent. of cases it will indicate a condition which might cause trouble.

As the failure of the bowels to act is only a symptom, we must review every feature of the patient's condition before the operation, every step of the operation, and the condition of the patient at the time of closing the wound, for an exact knowledge of these features must be had before we can devise the proper course to produce relief.

If at the end of twenty-four or thirty-six hours we find the patient has passed gas or fluid contents from the bowel, the prognosis is favorable. If there has been no intestinal evacuation we at once inquire of the nurse what has been given the patient—has opium been administered? Has there been nausea or vomiting? Has the food been liquid or solid? Has the patient been restless? Has there been any rise of temperature? These questions are asked, and the answers will influence further procedure. If the answers of the nurse indicate that an obstruction exists, we at once proceed to make a careful physical examination. The history of the case, the character of the operation, and the condition of the patient will all enter into the making of our diagnosis and the treatment indicated.

The following are some of the causes which may produce an obstruction: Spasm of the sphincter, adhesions, gas, packing, drains, vaginal tampons, feces, and, worst of all, septic peritonitis.

Knowing that a cause exists, we must carefully differentiate and locate the exact one, for great harm may result if we attempt to relieve a volvulus by an effort at relieving an obstruction due to feces or a mild non-septic peritonitis.

After an abdominal section, no matter how simple, we are not easy until we know the patient has had a free evacuation of the bowels, and the first free flatus is more musical to me than the strains of the finest Italian orchestra. We can then leave the patient, knowing that one obstruction on the road to recovery has been removed.

A great deal can be done to prevent this condition arising. Of course, we see many cases in emergency where a thorough and scientific prepara-

tion cannot be made, and these cases often go on to a fatal termination because of the lack of this preparation. The mortality from gunshot wounds would not be so high if a man would take a bath before going out to be shot. It is to this that I call attention for preventing many of the cases of post-operative obstruction. It would be criminal for a surgeon to open the abdomen without taking the precautions to prevent this serious and often fatal condition.

The necessary preparation consists in a thorough antiseptic preparation of the patient. No one to-day would attempt to open the abdominal cavity without first seeing that everything possible was done toward placing the patient in a thoroughly antiseptic condition, externally and internally; and one of the greatest things is a thorough evacuation of the intestinal tract.

This first free evacuation of the intestinal tract is accomplished in the first place by withholding food. When necessary to prepare a patient three or four days before opening the abdominal cavity above or below the umbilicus, the preparatory treatment should consist in the withholding of food, high rectal injections, drinking a great deal of saline water, and one of the best agents is large doses of castor oil, to which one or two drops of croton oil have been added. It is said that castor oil tends to constipate the bowels; this is prevented by the addition of croton oil. Another thing is the divulsion of the sphincter. I have seen a patient suffering with an accumulation of gas, when if the sphincter had been stretched this would not have occurred.

When ready for the operation, the patient should be placed in the Trendelenburg position, if the character of the operation will allow this and it can be done. If the operation is in the pelvic cavity, by placing the patient in the Trendelenburg position, gravity will remove the omentum and place the intestines where they will not have to be handled, and they can be thoroughly protected by antiseptic gauze or rubber tissue. Therefore, I strongly recommend the Trendelenburg position. We should be very careful about the way we handle the intestines, and also in the way we break up adhesions. All adhesions and every raw surface after section should be protected either by adjacent portions of the omentum or by bringing the edges together so that every raw surface is closed and covered. This will obviate one form of obstruction—that due to acute peritonitis. Every stump should be covered, and instead of having a pedicle remaining, we should dissect out the vessels and ligate them, and whatever tissue is in connection with the organ should be stitched over the stump so that the edges of the incision are drawn in and nothing but the simple surface of the peritoneum presents. This removes another great source of danger—adhesions.

Again, to prevent adhesions and stimulate a mild peristaltic action, we should place a large amount of saline solution in the cavity. I also believe in administering a high enema before the patient leaves the table

or soon after being put to bed. This has a tendency to stimulate a mild peristaltic action and a free evacuation of the intestines. The cause of this intestinal obstruction, where it is not due to a septic condition, is due to a slight constipated condition, just sufficient to clog the bowels. After obstruction once occurs, there is an accumulation of gas, fermentation, etc., and the condition goes on to one of septic peritonitis.

Another thing in the treatment of these cases that I follow, though not many men who have had the experience I have had do so, I know, is to administer to the patient, after he is put to bed, small doses of morphine combined with small doses of sulphate of atropine. My idea in this is to prevent the patient from being restless, so that for a few hours after the operation the patient does not suffer from that restless condition so characteristic following abdominal operations. I believe the administration of small doses of morphine just after the operation or just after the patient is put to bed will relieve a great many of the symptoms that might otherwise come on.

Another point in the effort to relieve ordinary obstruction of the intestines after mild catharsis and enema have failed, is the insufflation of oxygen gas. Ever since hydrogen gas was passed into the rectum and through the entire alimentary canal, more or less experimentation has been going on. It was Dr. Clement Cleveland who first suggested the insufflation of oxygen gas for the relief of intestinal obstruction. This is done by passing the gas through a tank of water and introducing it per rectum. It acts as a general tonic and stimulant, and a slight peristaltic action is induced, while it removes any twists that may exist in the intestines, and often produces a free and active catharsis. Dr. Cleveland says: "I have been so impressed with the sufficiency of oxygen gas in every instance in which I have used it, that I design to employ it always after abdominal section as soon as any symptoms of obstruction begin to manifest themselves. By so doing I believe that many cases which might prove serious may be prevented from becoming so. They will certainly be relieved of much distress, and convalescence will be much more endurable. As a prophylactic measure, I look upon it as of the highest importance. Oxygen is easily obtainable, and, in fact, is always on hand in hospitals and sanitarium. Its use is not attended with danger, if ordinary care is observed. It can be introduced slowly, and to make sure of this it should always be passed through water in a flask which is made for the purpose, that accompanies the cylinder of oxygen. Used in this way it is perfectly safe, for the patient always indicates the moment when it is desirable to stop. As soon as there is decided pain and a feeling of increased distention, the gas should be cut off. I have never seen the slightest evil effects from its use."

After inflammation or peritonitis has shown itself, whether septic or not, if the patient shows a high degree of temperature and a commencing peritonitis, I believe the ordinary method taught to-day for the treatment

of this condition is wrong. Once it has put in an appearance and we know positively that it is there, I believe the treatment by active catharsis is absolutely wrong. That patient demands mental, anatomical and physiological rest, and I believe that rest can be promoted and carried out by hot applications, flaxseed poultices, or anything to maintain heat constantly, or, if you wish, cold applications; but there should be some application to the abdominal surface. It is here, also, that the proper use of opium is indicated, as opium can bring about that anatomical and physiological rest that the diseased condition demands. I believe the time will come when this will be the proper treatment for active peritonitis, and I believe we will save more people and do more good than by the active treatment by catharsis which is generally prescribed to-day.

A MILDLY INFLAMMATORY CONDITION OF THE SKIN COVERED BY GREEN SCALES PROBABLY PRODUCED BY THE BACILLUS PYOCYANEUS.

BY MARTIN F. ENGMAN, M. D., of St. Louis, Missouri,

Chief of the Dermatological Clinic, Polyclinic Medical Department Washington
University, St. Louis, Missouri.

MR. L., age thirty-two, brunette, a well-nourished, healthy man. He came to me for an alopecia pityroides, and the very unique and interesting condition to be described. His scalp presented the usually mild seborrheic eczema seen in pityriasis capitis with alopecia. He was a man of gentlemanly appearance, and gave the impression as being one who took great care of his person. He was neat and clean. After examining his scalp, he asked me to look at a peculiar condition which he had had for some months upon his thigh and scrotum. He said he had consulted a well-known local genito-urinary surgeon about it, who had advised him to see a dermatologist. Upon exposing his scrotum I at once noticed that the silk suspensory bandage which he wore had a greenish stain upon it; the bandage was quite damp from perspiration, and the fiber of which it was composed was completely stained a deep green color where in contact with the skin. The straps of the bandage were likewise stained where they came in contact with the skin in passing over the perineum and thighs. Upon removing the suspensory there was disclosed a most peculiar condition. The scrotum, especially upon the left side, the upper inner part of the thigh, the part in contact with the scrotum and slightly beyond and somewhat upon the perineum, were covered by small dry scales of a deep green color. This condition was most marked upon the left side, being the one upon which the patient "dressed," but the right thigh in

the same position was also effected, he having "dressed" on that side at intervals. The parts presented no abnormal moisture, weeping or discharge, only the natural humidity of this locality in hot weather.

Closer inspection disclosed a slight redness underlying the scaly area, but this was very mild indeed. The scales were small, about one-eighth of an inch in diameter, of irregular shape, very dry upon the thigh, and were very superficially placed and thin. They were attached to the underlying surface by their centers, the edges being slightly curled, and were very easy to remove. Upon first glance the surface seemed to be completely green, but closer examination disclosed the fact that the scales alone were colored, and that these were placed very near each other, leaving very narrow little channels of mildly reddened skin between them. Very gentle scraping with the back of a knife-blade dislodged a small pill-box full of these scales, which, when heaped up in the box, gave an almost green metallic shimmer. The surface from which they came was perfectly dry, showing only mild inflammation by its slight abnormal redness.

Therefore, we have here a dry, scaly, mildly inflammatory condition which is not unique, but the color of the scales renders it at once of the greatest interest.

Subjectively there were no symptoms; only at times a slight itching, which occurs in this region normally. The patient stated he had always had some slight scaling upon his scrotum and left thigh at points of contact—not more, he thought, than normally exists there. About six months before his consultation he had noticed a green stain upon his suspensory, but thought it due to accident. He soon noticed this staining would recur whenever he perspired freely, and he then thought it due to some medicine he was taking. He asked his physician if this could be possible, who answered him it could not. About three months or so later the discolorations upon the suspensory increased in area, and in the last month, since the weather has been so warm, it has rapidly increased. Only a few days ago he noticed the green scales, when he became alarmed and asked his physician again about it, who examined him and advised his consulting a dermatologist. The patient gives no history of having had green pus, or of having been exposed to it. He had had a gonorrhea some two years ago with subsequent bladder complications, but never any greenish discharge. Nor was there anywhere over this affected area pustules or thickened patches. The region cited was the only part involved, the axillæ and other points of excessive perspiration were free from discoloration. The suspensories had been frequently washed, therefore no chemical contained in them could react with some principal in the sweat to produce this discoloration, with subsequent staining of the scales.

There could be no suspicion of malingering, as the appearance of the little green scales with the minute intervening almost normal channels could not be artificially produced, even were the patient subject to suspicion.

A small scale was placed upon a glass slide, a drop of acetic acid added; another glass slide placed at right angles across it, and a rotary motion employed until the scale became thoroughly macerated and divided, when the slides were quickly pulled apart, dried in the air, fixed in the flame, washed with ether and stained. Such slides showed cocci and bacilli, the latter far exceeding the former in numbers. Preparations of scales made by maceration in sterile water showed these bacilli to be actively mobile.

An emulsion of the scales was made with sterile water, and various culture media were inoculated with this. The dry scales were also rubbed over various media. In both cases typical cultures of the staphylococcus pyogenes albus, and the bacillus pyocyaneus were obtained.

The rôle of the bacillus pyocyaneus in diseases of the skin is usually limited to the infection of wounds and ulcerative conditions, ulcers, etc. Often have I seen such a complication with quite a good deal of sloughing. I remember a syphilitic ulcer of the foot which broke down very rapidly after being infected by this bacillus. But my personal experience with this bacillus in skin diseases does not extend further than this. Other experiences also seem to have a similar limit, for in going over the literature to which I have access (though it is, unfortunately, not extensive) I find only a few references to its role in other dermatoses.¹²³

Whether in this case the initial inflammatory symptoms with the scaling were produced by the bacillus pyocyaneus or the staphylococcus pyogenes albus is impossible to say. The staphylococcus pyogenes is no doubt a cause of dermatitis more often than is thought.

Many besides myself have produced marked inflammation of the skin with this coccus; but in this case the inflammatory symptoms were so mild, without any symptoms of thickening, pustulation or weeping, the usual results of *staphylodermia*, that I am inclined to attribute the condition under discussion to the *b. pyocyaneus*. In the majority of cultures from the skin we will find the staphylococcus an ever-present organism, entering with more or less energy into almost all dermatoses—a constant complicating factor. In this case it seemed to have acted with extreme indolence, while the *b. pyocyaneus* was apparently quite active, judging from its obvious contribution to the condition—the greenish discoloration or coloration of the scales. Thus, on purely theoretical grounds, I would consider the *b. pyocyaneus* the active agent.

2608 Locust street.

1. Ehlers found the *b. pyocyaneus* in *echthyma tirribant* in children. *Viertelj. f. Derm. u. Syph.*, vol. xi. (1884), p. 117. Quoted by Crocker, p. 369.

2. Kreibich found *b. pyocyaneus* in *echthyma gangrenosum* in children. *Arch. f. Derm. u. Syph.*, Bd. 1., Heft i.

3. A. Baginsky found *b. pyocyaneus* in *echthyma gangrenosum* in children. *Arch. f. Kinderh.*, Bd. xxviii., Heft i. u. ii.

MEDICAL AND SURGICAL PROGRESS.

SURGERY.

Edited by NORVELLE WALLACE SHARPE, M. D., President Medical Society, of City Hospital Alumni.

Brinckner (*International Journal of Surgery*, Vol. XIV., No. 7) in a brief article makes certain practical suggestions regarding the competency of surgical assistants. No one who has ever been compelled to work aided by awkward, ignorant or even merely untrained men as assistants can take exception to the reasonable requirements there laid down. If criticism be made, it would develop the fact that Brinckner's requirements are too lax. "Always there but never too much there" is a rule excellent as far as it reaches; but to-day when so much of our heavier operative work depends on technical skill in detail for its successful results, it must be conceded that efficient assistants must be developed in both quantity and quality. A few simple points point the moral and adorn the tale of suggestions that should be of special value to those who but occasionally "assist."

Wallace (*The Lancet*, 4063) in an address upon "Tumors of the Bladder and Enlarged Prostate," gives an interesting discussion of these topics; interesting chiefly in its lack of touch with modern thought and work. He disclaims any excellence in Peterson's rectal bag or any other means by which the bladder may be elevated. He prefers vesical inflation by fluid rather than by air, and suggests that the solution may be prevented from escaping by thrusting in a finger through the suprapubic wound. Claims that "primary union should not be aimed at." In prostatic work he advises "a silver catheter" as second choice to "a red rubber catheter." Says "a gum elastic catheter is not good." A similar haziness of thought and language prevails in his views of current operative procedures. His "lubricant" consists of vaseline 6, eucalyptus 1, in collapsible tubes. (No suggestion regarding sterile products offered.)

Bishop (*The Lancet*, 4063) records briefly "an undescribed innocent (?) growth of the gall-bladder." The interesting points noted were a multilocular cystic desquamation of the bladder, attaining the size of "a child's head," and the extirpation of the mass with suturing of the pedicle to the lips of the incision in order to avoid the risk of leakage which might follow segmental ligaturing, the growth of the tumor downward forbidding a single mass ligature. Patient has recovered satisfactorily, a cholecystenterostomy will doubtless follow. The laboratory diagnosis is inconclusive, save that malignancy does not seem evident. There had apparently been hypertrophy of the mucous lining of the wall, with im-

mense development and distention of the glandular layer. The illustrations attain the usual level furnished by *The Lancet*.

Hayward and Henderson (*The Lancet*, 4062) record a case of spontaneous amputation of the greater part of the tongue by multiple epithelioma. Nothing especially noteworthy is presented, save that about two months after coming under observation the distal portion of the tongue was cast off. When first seen an excavation about $\frac{1}{2}+1+$ -inch, directed downward and toward the hyoid, with occasional severe arterial hemorrhages constituted the objective picture. The progress of the growth was not unusual, the ulcer diminishing in size coincidently with increasing rigidity of the tongue as a whole. Pain was marked; and the reporters feel that a free use of opium, in their hands, prolonged the life of the patient by about two months. Mouth washes and b.-eucaïn were employed as needed. No operative measures were instituted.

Freiberg (*Cleveland Journal of Medicine*, Vol. VI., No. 7) emphasizes that knee-pains are caused not only by the well-known agents proximal to this joint, but that they may have origin lower down the limb. His conclusions are:

1. That abnormal conditions of the foot may be the cause of pains in the knee, with or without themselves presenting subjective symptoms.
2. Pronated and flat-foot being the most frequent cause of this character, it is possible for shortening of the calf-muscles to be the underlying cause of such knee-pain in the presence of pronated foot or of contracted foot.
3. The attachment of the calf-muscles to the knee-capsule through the medium of the plantaris may serve to explain this phenomenon.

Of collateral interest, Pal (*Wien. med. Woch.*, 41, p. 666) describes six cases of meralgia paræsthetica caused by flat foot. This group of symptoms was made to disappear by a mechanical treatment of the foot.

Finney and Pancoast (*Bulletin of Johns Hopkins Hospital*, Vol. XII., 124) describe "a portable operating outfit," which consists of a trunk and a tray; the latter is of service as an instrument table. Both sections of the trunk and the tray are provided with legs, by means of which they can be converted into an operating and instrument table, respectively. The trunk is divided into compartments suitable for nested bowls and pans, boiler, instruments, dressings, solutions, and the usual surgical paraphernalia. A lift for securing the Trendelenberg posture is included, and the whole so planned as to secure the greatest amount of utility with a minimum of lost space and inconvenience. The ultimate dimensions as a table are $70 \times 18\frac{3}{4} \times 35$ inches. Gross weight of trunk and contents, $115\frac{1}{2}$ pounds.

Halsted (*Bulletin Johns Hopkins Hospital*, Vol. XII., 121-123) discusses "Retrojection of Bile into the Pancreas a Cause of Acute Hemorrhagic Pancreatitis," and submits in evidence a case. This individual had been subject to attacks of "vertigo" and "indigestion" for several years. He was seized suddenly with a severe abdominal pain, after several days of indigestion, during spring of 1901. He was nauseated and complained of "gas in the stomach." Appropriate treatment was given. For twenty-four hours he was relieved. Later, pain became severe; morphine failed to relieve. Chloroform by inhalations proved necessary. Patient became nervous, pain intense over the epigastrium, most marked to the right of the umbilicus, moderate cyanosis present. When operated upon next day, cyanosis had increased. Blood-stained fluid escaped from cavity, and fat necroses were wide-spread, particularly in the omentum, mesentery and curvatures of the stomach. No tumor found; peripancreatic tissues slightly infiltrated with blood-stained serum, and a distended common bile-duct were the most noticeable features. No stone found. Death in twenty-three hours. Emphasis, as a diagnostic aid, is laid upon the slightly cyanosed field covering the point of greatest tenderness. A minute stone was discovered at autopsy.

The conclusions of Halsted upon this disease are as follows:

Why is pancreatitis hemorrhagica acuta such a rare disease?

1. That bile may be retrojected into the pancreatic duct the stone must be (*a*) too small to occlude the pancreatic duct or interfere with the force of the jet, and at the same time (*b*) too large to pass the papilla.

2. A narrow papillary orifice, such as we found in my case (a rare condition) would predispose to this affection, because many stones small enough to fulfill (*a*) the first condition are too small to fulfill (*b*) the second.

3. One calculus would be more likely to cause the pancreatitis than several; for other stones in this duct, unless very small, would weaken the force of the bile-spurt which drives the ball-valve against the papillary orifice.

4. The gall-bladder must perhaps be normal or nearly so, not thickened, shrunkened or weakened by inflammation. Accordingly one must have a calculus or calculi which have produced insignificant changes, if any, in the walls of the bladder.

5. A predisposition may be necessary, as is given by adiposis and excessive use of alcohol.

GYNECOLOGY AND OBSTETRICS.

Edited by HUGO EHRENFEST, M. D., Consulting Gynecologist, St. Louis City Hospital.

Vaccination of Pregnant and Puerperal Women and Newborn Children.

—(Palm, *Monatschr. f. Geb. u. Gyn.*, Vol. 13, 1901.) A case of small-pox occurring in Goettingen necessitated the preventive vaccination of all the inmates of the maternity hospital of this city: namely, ninety-two pregnant and puerperal women and seventy sucklings. Neither pregnancy nor the puerperium were influenced, and the condition of the children also did not seem to be affected. The possible immunization of the fetus by vaccination of the pregnant women during the latter stage of pregnancy is denied. In forty-three cases the vaccination of the newborn was effective, although the mothers were vaccinated within six to one hundred and fifteen days previous to confinement.

Small-Pox in the Newborn.—Roger (*Societe med. des hopiteaux*, Paris) reports his experience with eleven cases of small-pox in pregnant women. All the children were apparently well at the time of delivery. With a single exception, they soon afterwards showed a temperature as low as 28° to 31° C. and died. Seven of these children between fifth and seventh day developed an exanthem, which, in some instances, had the characteristic appearance of small-pox pustules. Only one child survived. It is noteworthy that the mother of this child was vaccinated during pregnancy.

Myomectomy of Nine Myomas During Pregnancy and Delivery at Term.

—John Duncan Emmet (New York) extirpated in a woman, about three months pregnant, nine myomas, one of which was deeply interstitial. The patient made a perfect recovery, and gave birth at full term to a well-developed child. Delivery and puerperium were normal. This case is interesting from more than one point of view. First, it confirms the fact emphasized by many authorities, that pregnancy must not be considered a contra-indication for operation, not even if the field of operation be the neighborhood of the uterus itself. Furthermore, Emmet, taking into account his case and the statistics of different surgeons, shows that conservative myomectomy is to be given preference in general to radical hysterectomy. Pregnancy presents a special indication for the conservative procedure, as it offers the possibility of saving the child's life.—*American Medicine*, June 29, 1901.

On the Treatment of Pruritus Valvæ.—(L. Siebourg, *Centralbl. f. Gyn.*, June 29, 1901.) First of all, those conditions which either are causative of this disease or militate against the healing are to be removed. An exact urinalysis is of great importance. The diet has to be regulated. Alcohol and highly seasoned food should be interdicted. Patients are to be

left alone as little as possible, in order to prevent rubbing and scratching the vulva. The finger-nails should be kept short. The diseased parts are washed with soap and cold water at least twice a day, especially after the patient has urinated. The following ointment gave good immediate and lasting results:

℞ Cocaine.....	2.0 grammes
Orthoform.....	1.5 “
Menthol.....	0.5 “
Acid carbolic.....	1.0 “
Vaselin	20.0 “

If there are small excoriations, they should be cauterized with a ten per cent. solution of nitrate of silver. If the condition is chronic and the skin is not abraded, the following solution should be applied:

℞ Spirit. rusci.....	50.0 grammes
Acid. salicyl.....	0.5 “
Resorcin.....	1.0 “

After thorough cleansing apply with a soft brush.

Latterly the writer has found that the subcutaneous injection of about 300 cc. of normal salt solution gives good results. The injections had best be given in the evening. He explains their efficacy in this way:

“The injected fluid puffs up the skin, thus stretching the ends of the nerves, and produces a local anesthesia analogous to the anesthesia of Schleich’s method.”

Diagnosis of Tumors of the Frontal Lobes.—Hoeniger reports several cases of tumor of the frontal lobes in the *Muench. med. Wochens.*, May 7, 1901. The first case, a woman of fifty, one year after the climacteric, developed melancholia and suicidal tendencies. The patient also had slight paresis of muscles of the right side of the face, followed by persistent agrypnia, then vomiting and twitching of the hands, and a peculiar staggering gait. Later a left-sided hemiparesis followed. She finally died of exhaustion. This patient developed a tendency to make jokes; and the same thing was observed in a second patient. Hoeniger ascribes this phenomenon to an irritation of the motor speech center. He supports this hypothesis with numerous examples from his own clinical experience. The writer says that it is permissible to draw conclusions from these cases as follows: We may think of tumor of the frontal lobe if the earliest symptoms are psychical in character, or, if in the course of the disease, psychical symptoms are more pronounced. The diagnosis becomes more certain if there are cerebral atopia, spasms of the muscles of the trunk or disturbances of speech. In addition there may be motor disturbances as symptoms of nervous lesions.

MEDICINE.

Changes in the Bone Marrow in Leucocytosis.—Ruberstein, in the *Zeitschrift fuer klinische Medicin*, Bd. 42, Hefte 3 and 4, details a method of excising a portion of the ribs of rabbits and carefully counting all the different varieties of cells in sections of the marrow, and at the same time counting carefully the white cells in dried preparations of the blood. Immediately thereafter the rabbit was injected with a leukocytotic; he used chiefly streptococci cultures, turpentine, deuteroalbumose and extract of spleen. The results from these substances were equally good. The conclusions that he reaches are that leucocytosis (purely in the sense of an increase of other cells than the lymphocytes) is a function of the bone marrow only.

Stricture of the Pylorus without Retention of Gastric Contents.—Suopault (*Gazette des Hopitaux*, July 16, 1901,) speaks of stricture of the pylorus without a retention of the stomach contents. He claims that stricture can exist without stopping up the outlet. These cases show clinically their presence by simple functional trouble in the stomach, sometimes hours after the ingestion of food. The evolution of such a case is somewhat as follows:

The symptoms show themselves in a succession of attacks, which gradually begin to increase in frequency until they are continuous. After probably ten or twelve years' standing, the patient is bothered all the time by the symptoms of retention food. Surgery offers the only relief, of course, both as a means of making a positive diagnosis and as a cure.

Variability of Alexines in Pathologic Sera.—Camus and Pagniez have studied, according to the method of Homberger, the hemolytic action exercised by serum in individuals suffering with different diseases. They found a protective serum in man in different diseases which contains an alexines which protects animals to some extent against pathologic conditions.—*Le Progres Medical*, July 20, 1901.

Juvenile Progressive Paralysis.—J. A. Hirschel reports four cases of juvenile form of progressive paralysis (*Wiener klin. Woch.*, No. 21). The juvenile form has for its etiology congenital syphilis. Together with the paralysis there is present sometimes simple dementia or hypochondriacal states. Post-mortem findings in these cases show diffuse cerebral sclerosis with severe leptomeningitis.

The Inoculation of Rabbits with Variola.—Roger inoculated a rabbit with the pus from a case of variola; death followed after the appearance

of discrete pustules. Some animals resist variolization, dependent upon the resistance of the particular animal and the virulence of the variolous pus. Animals which are well fed resist better than those poorly nourished.—*Le Progres Medical*, July 20, 1901.

Treatment of Sciatica.—Leri has treated cases of sciatica by epidural injections of cocaine; this is the treatment of choice, while intra-arachnoidal injections are not so good, because the effects are not constant and the procedure is hazardous.—*Le Progres Medical*, July 20th.

Grippe Simulating Typhoid.—Roustan has studied a form of grippe in Cannes, where abdominal pains were very pronounced, simulating typhoid fever.

Stuporous Melancholia Lasting Three Years and Eight Months, Followed by Recovery.—The August issue of *Medicine* states that MacCoy, in the *Journal of Nervous and Mental Diseases* for July, 1901, describes a case which seems to be almost unique in asylum annals. The patient was twenty-eight years of age, of intemperate habits, with a specific history. He was admitted to the asylum with a statement of the duration of this mental trouble of two weeks. From November, 1895, to September, 1896, the history was that of an ordinary melancholia. In the latter month he passed into a condition of stupor, refusing to leave his bed, or voluntarily to take any nourishment. He remained in this state until May, 1900. During all this period he was fed three times a day by a nasal tube, receiving at each meal a pint of milk, two eggs, some salt, and sugar. To prevent bed-sores his back was daily rubbed with alcohol, and several times during the day he was turned from his back to his right or left side. In May, 1900, he began to show signs of returning mental activity; occasionally he would open his eyes and wink for several minutes at a time, and shift himself about in bed to assume a comfortable position. The following month he sat up and ate a meal for the first time in three and a half years. Later he was dressed, and since then his condition has justified his discharge as recovered.

Treatment of Chronic Hydrarthrosis of the Knee.—Ballenghien reports a case of hydrops articuli in a man of twenty-eight (*Journal des Sciences Med. de Lille*, No. 17). He had already had his knee treated by ignipuncture, after which the effusion returned. The next year it was again punctured, and again the year later, but it returned. Then the right knee became infected. No cause for the condition could be found. The left knee was incised and irrigated with carbolic acid solution 1-20. He recovered. One danger in this method is that of absorption of the carbolic acid.

OPHTHALMOLOGY.

Edited by JOHN GREEN, JR., M. D.

Cases of Congenital Word-Blindness.—(E. Nettleship, London. *Ophthalmic Review*, March, 1901.) Hinshelwood (*The Lancet*, May 26, 1900,) published two cases of "inability to learn to read" in boys, aged respectively ten and eleven. The first case recognized only a few of the letters of the alphabet, and "was unable to read any words at all." He recognized numerals with difficulty, but pictures and faces readily. His "auditory" memory of letters and words, on the other hand, was excellent. The second case could read the alphabet and common small words, such as "the," but uncommon small words, such as "tub," only after spelling them aloud. Numerals were read easily. Both boys were, in other respects, bright and intelligent. Hinshelwood ascribes the difficulty to "organic deficiency in the part of the brain where the visual impressions of letters and words are stored."

Nettleship reports five cases, as follows:

CASE 1.—C. R., male, aged eleven, reads with extreme difficulty; easily comprehends what is spoken to him, and "can pronounce words spelt out to him, and spell words that are spoken to him." Vision: 20-20, tardy recognition. No accommodative trouble. Jaeger, 1 and 10, were read very slowly and *with equal difficulty*. A word spelled out to him was recognized at once. No abnormality in the fundus. Fields and color sense normal.

CASE 2.—C., male (young boy, age not given), "hardly knows even short words when he spells them; he takes in what is read to him, but not what he reads." No ocular abnormality existed. He subsequently learned to read easily.

CASE 3.—M., male, aged nine, was "backward in reading," otherwise a bright boy. Vision was normal. Jaeger, 1 and 10, were read slowly and with equal difficulty. There was a slight refractive error.

CASE 4.—G., male, aged twenty-three, "always a slow reader, bad speller and unable to do paper work." "When he tried to read quickly he put the syllables of the longer words in the wrong order." "He remembered words by sound, but could not reproduce them by spelling or writing. He had a slight hyperopic astigmatism with the rule.

CASE 5.—L., female, aged twenty-one. "In reading she put in words that were not there, and could not easily pass from one line to the next." Needlework occasioned no difficulty. Vision, 6-5. Two brothers are stammerers.

Nettleship notes that in his series eight out of nine cases were males, but suggests that "the tendency to condone difficulty in reading in a girl may have led to cases being overlooked in females." It is of the greatest

importance to determine whether the condition is amenable to treatment or is irremediable. In the former case, the best results will probably obtain from the old plan of teaching a child his letters and giving methodical instruction in reading from the earliest age. In the latter case Nettleship suggests that the attempt to teach the child to read be abandoned, and special methods analogous to those employed with "backward" and "defective" children be resorted to.

Changes in the Fundus Oculi in Pneumonia.—(A. Peters, Bonn. *Klin. Monatsblätter fuer Augenheilkunde*, May, 1904.) It has long been known that pneumococcus metastases occasionally gives rise to grave ocular infections in the form of suppuration of the vitreous and panophthalmitis leading to unilateral or total blindness. Of more recent date is the knowledge that less extensive fundus disturbances may originate from emboli. Vision is only slightly impaired, and the lesions are capable of complete resorption.

The principal subjective symptom is disturbance of vision. In one case the patient observed "sooty clouds" in the periphery of the field. Eventually vision returns to normal.

The ophthalmoscope shows in the vicinity of the macula several round, gray-white patches, of one-third to one disc diameter. The borders are at first well defined, but later become blurred. Some of the spots are raised above the general fundus level. The condition finally clears up entirely.

The differential diagnosis between embolus and retinitis septica is often difficult. Peters suggests the following points:

EMBOLUS.

1. Visual disturbance *may* date from the first day of the disease.
2. Patches of infiltration are round or roundish
3. Patches may be raised above fundus level.
4. Hemorrhages absent.

RETINITIS SEPTICA.

1. Visual disturbance always delayed beyond the first day.
2. Patches are usually striated.
3. Patches are not prominent.
4. Hemorrhages usually present.

The condition may also be mistaken for tubercle of the choroid.

Peters hopes that further observations will give additional points for diagnosis, and recommends systematic ophthalmoscopic examination in pneumonia.

Epicanthus.—(Foggin, Newcastle-on-Tyne. *Ophthalmic Review*, January, 1901.) Foggin has observed "more or less evidence of redundancy of the skin-fold at the inner eye angles" in a considerable number of newborn. With the growth of the nasal bones the condition almost invariably disappears. The proportion of cases of persistent epicanthus is exceedingly small.

The writer ascribes the condition to "incomplete development of the nasal bones" and "unusual tightness of the cheek tissues." Temporary obliteration of the fold may be produced by either (a) "pinching the skin of the nose-bridge," or (b) "gently pressing upwards and inwards the tissues of each cheek from the superior maxillæ toward the inner canthi."

Besides the congenital form, bilateral epicanthus may occur subsequent to necrosis of the nasal bones. Unilateral epicanthus is an occasional sequel of burns, scalds and destructive blepharitis.

In congenital epicanthus with extremely flat nose-bridge, Foggin has used a form of spectacle pince-nez which serves the double purpose of "neutralizing" the tightness of the cheek muscles and relieving the pressure from the bridge of the nose. Orthopædic methods failing, the writer has employed the following operative technique: The tissues of the nose-bridge and epicanthal fold are detached freely by a Græfe knife introduced subcutaneously on either side of the nose. Sutures are introduced and firmly secured to two lead plates shaped to conform to the contour of the nose. The plates are left *in situ* a fortnight.

Of two cases operated by this method one was unsuccessful, owing to swelling and pain, which necessitated the removal of the sutures. In the other the result was very gratifying.

The advantages of the method are:

1. Complete obliteration of the epicanthus.
2. Increased height of the bridge of the nose.
3. Avoidance of the central nasal scar of the von Ammon de Wecker and Sichel operations.

Loss of Pupillary Reflex in Its Relation to Syphilis.—Babinski and Charpentier, *Annals d'Oculistique*, July, 1901.—The authors affirm that permanent loss of the pupillary reaction to light, when not dependent on disease of the globe optic nerve or paralysis of the motor oculi, is an almost pathognomonic sign of hereditary or acquired syphilis. They conclude that the loss of pupillary reflex indicates that the disease has invaded the central nervous system and that the patient is a candidate for tabes, diffuse meningo-encephalitis, or cerebro-spinal syphilis. In view of the fact that vision is not impaired, attention is not likely to be called to the eyes, and the phenomenon is apt to be overlooked. They suggest that determination of the pupillary reaction be made a part of the routine of all physical examinations.

PEDIATRICS.

Edited by A. FALLER, M. D.

Treatment of Pneumonia in Children.—Louis Fischer (*N. Y. Med. Jour.*, April 27, 1901,) uses the following treatment in pneumonia among children, with onset of fever: One-drop doses of aconite every hour until six doses have been taken; half-teaspoonful doses of fresh spiritus minderein at same time, and continue until general diaphoresis is produced; a mustard foot-bath for two or three minutes will stimulate the circulation and promote diaphoresis and lower the temperature; give calomel until a liquid green stool is produced. Water should be given freely to aid in the elimination of toxic products and to produce diaphoresis and quench thirst of fever. Since children almost invariably swallow expectorated matter, an occasional dose of calomel or castor oil should be given throughout the course of the disease. Antipyretics of the coal-tar series should rarely be used; when used, they should be combined with musk or camphor. Sponging with cold water or acetic ether will usually reduce the temperature. When this fails, a cold pack in a wet sheet may be tried; and where severe nervous symptoms exist, a tub-bath of five minutes' duration, beginning at 90° F. and reducing to 70° F., is of great benefit. Vigorous rubbing while the child is in the bath must be practiced, and a few drops of Hoffman's anodyne should be given very young or delicate children before the bath. Intense dyspnoea is relieved by dry cups anteriorly and posteriorly over the thorax. In catarrhal pneumonia, when dyspnoea and cyanosis become pronounced, the alternate use of the hot and cold douche or the hot and cold bath will afford relief. Oxygen can best be obtained by proper ventilation, opening the windows and screening the patient from direct draughts. Where the cough is persistent and prevents sleep, give codeine in small doses; one-tenth of a grain, repeated in two hours, if necessary, is the proper dose for a child one year old. Good Tokay wine or diluted whisky must be given when a toxæmic condition exists; coffee, with very little sugar and milk, is an excellent stimulant.

Sociological Statistics in Medicine.—Under the heading "Soziale Medizin und Statistik," Dr. Arthur Ruppín presents in the *Deutsche Medizinische Wochenschrift*, June 27th, a very interesting, if not thoroughly trustworthy, article, in which he endeavors to demonstrate the influence of either parent upon the vitality of the child. Basing his conclusions upon Prussian statistics for the years 1875–1899, inclusive, the writer accepts the Jewish race as his starting-point. Among this race, during the period stated, the proportion of infants born dead was 32.07 per thousand; among Christians, during the same period, the proportion was 35.88; from these facts Dr. Ruppín endeavors, by manipulation of parents, to show which has the greater influence upon the vitality of the child. Going

further, the doctor shows that in intermarriages, where the father is a Christian and the mother a Jewess, the rate of infants born dead is 35.76, or nearly as high as when both parents are Christians; however, when the father is a Jew and the mother a Gentile, the rate falls to 33.17. The writer claims from these statistics, and not without some reason, that the father exerts more influence upon the vitality of the offspring than does the mother. The writer also adds that Christian-Jewish marriages (father Christian, mother Jewish) produce about 273 children yearly, while among Jewish-Christian marriages only about 244 births result—which, when we consider that more Jewish men marry Christian girls than *vice-versa*, adds additional proof to the well-known fact that Jewish women are more fruitful than Christian women.

Heart Lesions of Infancy and Childhood.—Dr. I. A. Abt, in the July number of *Medicine*, presents a very interesting article on this subject, in which he presents the following conclusions: Cardiac percussion in children is a more favorable procedure than in adults, since the relative dullness can be easily and accurately determined, due to the thinness of the chest wall, and also to the fact that the lung does not cover the child's heart to the same extent as in the adult. The pathological changes in the child's heart are simpler than those of the adult, as the blood supply, being greater, limits the production of chronic inflammation of the muscle and fatty degeneration. Brown atrophy is also very rarely seen. Diseases of the coronary arteries are rarely present in children; the various toxic agents, alcohol, lead and tobacco play no part in the diseases of the child's heart. The strain upon the child's heart is less than that upon the adult's, since it is relatively larger, while the arterial system is wider, thus lessening blood pressure in the aorta. Among causes of pericardial and endocardial murmurs, rheumatism, of course, is the most frequent; follicular tonsillitis plays an important rôle; scarlatina and pneumonia are important factors; gonorrhœa, rare in children, does not have the importance in the production of this variety of inflammation that it has in adults. Congenital heart disease occurred three times in fifty cases. Prognosis of endocarditis grave in early childhood, because the condition is often associated with pericarditis, which condition leads to rapid cardiac dilatation, myocardial inflammation and adhesions between the heart and pericardial layers, mechanically interfering with the heart's action. Recurrent attacks of inflammation at the affected valves is frequent, each attack making the prognosis more unfavorable. If primary attack is mild with no recurrences, the prognosis, under proper treatment and hygiene, is good. Intercurrent diseases, as severe anemia, bronchitis, nephritis, pneumonia, or any acute infectious disease, greatly increase the dangers in these cardiac affections.

Traumatic Zona.—R. Millon, in the *Archives de Maladies des Enfants* for July, 1901, reports two cases of traumatic zona. This condition was

described as early as 1849 by Rayer; another case was published by Charcot in 1859. The peculiarity of the eruption is that it occurs in the region of a nerve which has received a traumatism; it is not accompanied by fever or other signs of infection, nor the general phenomena which commonly accompany zoster due to other causes. The first patient was a young girl who accidentally ran against a table, the point impinging on the anterior part of the thorax. For a moment the pain was severe, but it apparently passed off. Three days later the part became red, and a crop of herpetic eruptions appeared, surrounding the place where the blow had been received. The eruption extended around the chest. Pain and burning followed. There was no fever. The second case was that of a girl of thirteen years, who had noticed an eruption on the arm following a fall. The immediate effect was pain which was followed after two days by an eruption over the site of the injury. There was no fever or constitutional symptoms.

Early Recognition of Ear Disease in Childhood.—Yearsley, in *Pediatrics*, June 1, 1901, refers to the failure on the part of some practitioners to recognize adenoids as the cause of ear disease in children. Very often they are not made out until considerable thickening of the drum membrane has taken place. Whenever the drum shows a marked loss of transparency, and a dullness which resembles ground glass, it is almost certain that the case has gone too far for a recovery, or even an improvement. If the first two years of a child's life are passed without the acquirement of one or two simple words, it is probable that there is a defect in hearing. The early recognition of these defects is important, and it is better to resort to an examination under chloroform than to risk a possibility of the trouble becoming permanent. Discharges from the ear in children are always important, as are earaches. The ear may offer an explanation of many a puzzling febrile attack in children.

A "cold in the head" in children almost always affects the lymphoid tissue in the vault of the naso-pharynx, and accounts for the frequency of inflammation in the middle ear in early life. Such inflammations may give rise to meningitis, but more frequently simulate that disease.

PATHOLOGY AND BACTERIOLOGY.

Edited by R. B. H. GRADWOHL, M. D.

Ankylostomiasis.—Mr. C. Le Neve Foster, D. Sc., F. R. S., in his report just issued for 1900 as His Majesty's Inspector of Mines for North Wales, makes the following interesting allusions to this disease: "When I learned that the company owning the Frongoch mine in Cardiganshire had imported a number of Italian workmen, it occurred to me that they might unwittingly be the means of introducing ankylostomiasis, or miner's anemia, into this country. I at once put myself in communication with the mine doctor, who reported that certain of the men were ill and possibly suffering from that disease. I obtained samples of their evacuations and sent them to Dr. Malvoz of the Bacteriological Institute in Liege, who has had much experience in searching for the parasite among the miners in his own country. He reported that the men were free of that disease. It is well for the British employer to be on his guard against employing foreign workmen in mines, knowing that they are often the subjects of this disease. The importance of the ankylostomum duodenale is very great because it causes a severe and often fatal anemia. In countries where it is endemic, a very large proportion of the inhabitants are affected, and Dobson found in India in the stools of seventy-five per cent. of the persons to whom he had administered thymol. It is said to be discovered in the intestine of every person at post-mortem in Egypt. The disease, according to Cobbold, is not endemic in this country, and therefore every effort should be made to exclude it." (*The Lancet*, July 27, 1901.)

The Hereditary Arthritic Forms of Pretuberculosis.—Dr. G. E. Pspillon, of Paris, read a paper at the British Congress of Tuberculosis on this subject. In heredo-arthritic people, he said, the pretuberculous stage might be disclosed by arthritic manifestations, such as fits or asthma, attacks of subacute rheumatism, late appearance of *stigmata de l'arthritisme*. These were not tuberculous localizations, as the "tuberculous rheumatism" described ten years ago by Poncat, but only effects of the bacillary toxin. These fits of asthma, rheumatic attacks, arthritic deviations, etc., were the symptoms of hereditary disorder. They affected the contractility of the bronchial muscles, the secretion of the articular synovia, or the nutrition of the bone ends, cartilages, and periarticular muscles; they were the manifestations of a sympathetic reaction to tuberculous intoxication.

A Micro-Organism Found in Syphilitic Tissue.—M. Julien not long ago stated before the Academy of Medicine that in the blood and serum of syphilitic patients who had recently been infected, and who had not undergone any specific treatment, M. de Lisle and himself have confirmed the

presence of round, granular, highly refracting bodies such as have already been described by other observers. They have been unsuccessful in the cultivation and inoculation experiments with these bodies. This is not surprising, for it is known that syphilitic blood when coagulated is harmless, a peculiarity which may be explained by the existence in the blood after coagulation—*i. e.*, in the serum—of an alexine which is strongly bactericidal. Researches have been undertaken as to the nature of the serum from a blister, whether produced by cantharides or by the actual cautery. Such serum they found to contain no alexine whatever. They did find, however, a polymorphic organism bacillary in shape and showing all intermediate stages between that of a slender rod and that of a long filament. The organism was mobile, staining easily with all the stains, but not by Gram's method. It produced paralysis and death in pigs. The organism is agglutinated by syphilitic blood.

Medical Society of the Missouri Valley.—The fourteenth annual meeting will be held in St. Joseph on Thursday, September 19th, and Eureka Springs, September 20th and 21st. The 'Frisco line will carry members free from Kansas City to Eureka and return. One fare for the round trip (\$1.90) has been secured from St. Joseph to Kansas City. Pullman fare will be \$1.00 each way, \$2.00 for double berth, which must be remitted to the secretary before September 1st, in order that extra cars may be provided for the party. A daylight ride on the return trip may yet be arranged if a majority prefer it.

One day's scientific session will be held in each city, and last day will be devoted to sight-seeing at the springs. In the evening a reception will be tendered the association by the local profession and Commercial Club. The scientific program includes an illustrated pathological lecture by Dr. L. H. Warner, of New York city; addresses by Drs. C. H. Hughes and Frank J. Lutz, of St. Louis, and Dr. Frank Parsons Norbury, of Jacksonville, Illinois; an exhibition of specimens illustrating causes of uterine hemorrhage, by Dr. Palmer Findley, of Chicago; "Treatment of Obesity," by Dr. Harold N. Moyer, Chicago; "Some Twentieth Century Thoughts on Medicine," by Dr. Charles E. Davis, Eureka Springs, Arkansas; "Club-Foot—Its Modern Treatment," by Dr. J. W. Cokenower, Des Moines, Iowa; "Is it Rational to Operate Upon Every Case of Appendicitis as Soon as Recognized?" by Dr. Wm. Jepson, Sioux City, Iowa. Papers have also been promised by Drs. Flavell B. Tiffany, Kansas City; E. S. Pettyjohn, Chicago; Le Roy Crummer, Omaha; J. Homer Coulter, Chicago; W. O. Henry, Omaha; Chas. Geiger, M. F. Weymann, P. I. Leonard, and W. L. Kenney, St. Joseph.



Adolph Lorenz: Ueber die Heilung der angeborenen Hueftgelenks verenkung durch unblutige Einrenkung und functionelle Belastung. (On the Treatment of Congenital Dislocation of the Hip-Joint Without Operation.) With 84 Drawings. Published by Franz Deuticke, Leipzig and Vienna. 1900. Price, 10 marks.

Lorenz, whose merits for the development of conservative orthopedic surgery are well known all over the world, gives in this book an exact account of the course of treatment at present employed by him in cases of congenital displacement of the hip-joint. He gave up operative measures and claims to succeed in nearly all of his patients by conservative means. Out of 212 displacements, after the treatment the head of the femur was 108 times found in an about normal condition. The functional results were very satisfactory. He gives in detail the description of his method, which hardly could be explained here in brief. So we only can refer those interested in orthopedic surgery to this excellent book.

Laryngeal Phthisis. By RICHARD LAKE, F. R. C. S., Surgeon Laryngologist, North London Hospital for Consumption, etc. Philadelphia: P. Blakiston's Son & Co.

This is a very complete condensed treatise on a class of most difficult and discouraging complications. One of the most interesting chapters is that upon prognosis, in which the author records 48 cures in 329 cases. The illustrations are excellent. W. P.

Mouth-Breathing. By MAYO COLLIER, F. R. C. S. Eng., M. S. London, President of the British Laryngological, Rhinological and Otological Association. Henry J. Glaisher, London. 1901.

This monograph is intended to foreshadow a large work now in preparation. From first to last it is interesting and instructive. It is the clearest and most concise essay upon this much-neglected subject that we have seen. W. P.

Clinical Pathology of the Blood. By JAMES EWING, A. M., M. D., Professor of Pathology in Cornell University Medical College, New York City. Illustrated with 30 Engravings, and 14 Colored Plates Drawn by the Author. Lea Brothers & Co., Philadelphia and New York. 1901.

This excellent work is of value to student and general practitioner, and also goes deep into the subject, so that the hematologist will find it of practical use. The literature on this subject is voluminous, and much of what is good has come out in the last few years, and has not previously been amassed into a text-book. All this information is comprised in the pages of this work. It contains, in addition to the collation of literature, some good original thoughts of the author. We recommend this book highly. It belongs to that class of scientific works that are sure to become popular with all readers.

Progressive Medicine, Vol. II., June, 1901. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in Jefferson Medical College of Philadelphia. Octavo, Handsomely Bound in Cloth, 460 pages, with 81 Engravings and one Full-page Plate. Lea Brothers & Co., Philadelphia and New York. Issued Quarterly. Price, \$10 per year.

This second volume of the popular quarterly review of medicine and surgery known as "Progressive Medicine," contains the following monographs:

Surgery of the Abdomen, Including Hernia, by William B. Coley; Gynecology, by John G. Clark; Diseases of the Blood and Ductless Glands, the Hemorrhagic Diseases, Metabolic Diseases, by Alfred Stengel; Ophthalmology, by Edward Jackson.

Coley deals in detail with Phelps' operation for inguinal hernia, and devotes considerable space to Council's end-to-end anastomosis of the small intestine.

In regard to Gaylord's latest researches, a study of the very elaborate abstract from Leopold's (Dresden) work on parasites of cancer, given in Clark's essay, is of great interest. Special attention may be called to the chapters dealing with pernicious anemia and diabetes mellitus in Stengel's monograph. Jackson's summary on ophthalmology is distinguished by the great number of papers reviewed in it.

Thus both the general practitioner and the specialist will find in this new volume a complete and consecutive synopsis of the latest advances in medical and surgical sciences in a concise and clear form.

The Acute Contagious Diseases of Childhood. By MARCUS P. HATFIELD, A. M., M. D., Professor Emeritus of Diseases of Children, Northwestern University Medical School; Professor of Diseases of Children, Chicago Clinical School; Attending Physician, Wesley Hospital. Pages, 142. Price, \$1.00, net. G. P. Engelhard & Co., 358-362 Dearborn street, Chicago. 1901.

This little work gives in a terse form a consideration of the acute contagious diseases of childhood, and embraces all that is recent in this branch

of pediatrics. It is a scientific discourse and will well repay perusal. The several diseases are taken up systematically. Scarlatina is given special prominence and is well treated. In short, it can be recommended to those who wish to get facts on this subject in a hurry and to be informed of the most recent literature in brief outline.

A Syllabus of New Remedies and Therapeutic Measures, With Chemistry, Physical Appearance and Therapeutic Application. By J. W. WAINRIGHT, M. D., Member of the American Medical Association, New York State Medical Association, United States Pharmacopeial Convention, 1900; American Chemical Society, etc. Pages, 229. Price, \$1.00, net. G. P. Engelhard & Co., 358-362 Dearborn street, Chicago. 1901.

The author states in his preface that his aim in this book is to give the practitioner information on the new remedies that appear from time to time, which do not go into the text-books, for some reason or another. He gives a succinct review of the most important remedies, and we feel sure that the book will fill a "long-felt want" in medical literature. It is to be recommended to the profession.

Principles of Surgery. By N. SENN, M. D., Ph. D., LL. D., Professor of Surgery in Rush Medical College in Affiliation with the University of Chicago; Professorial Lecturer on Military Surgery in the University of Chicago; Attending Surgeon to the Presbyterian Hospital; Surgeon-in-Chief to St. Joseph's Hospital; Surgeon-General of Illinois; late Lieutenant-Colonel of United States Volunteers and Chief of the Operating-staff with the Army in the field during the Spanish-American War. Third edition. Thoroughly revised with 230 wood-engravings, half-tones and colored illustrations. Royal Octavo. Pages, xiv—700. Extra Cloth, \$4.50, net; Sheep or Half-Russia, \$5.50, net. Delivered. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry street.

This excellent work from the pen of a master in surgery comes now to us in its third edition. The work represents an epitome on the principles of surgery, and is intended for the student and practitioner. Its pages contain nothing that is antique, but it includes all that is modern in the etiology and treatment of surgical disease. The necessity for such a book is manifest; there are too many text-books on surgery which do not go into the principles of the subject, but are merely working mechanical manuals. To meet this deficit this book was written, and its reading will certainly acquaint one with the true principles of surgery. No one should practice surgery who does not understand the reasons for each condition that he finds and the means by which he can overcome these conditions, founded on logical grounds. To those who desire a book which will thoroughly instruct them on the science as well as the art of surgery we cheerfully recommend Dr. Senn's valuable work.

Manual of the Diseases of Children. By JOHN MADISON TAYLOR, A. M., M. D., Professor of Diseases of Children, Philadelphia Polyclinic, and WILLIAM H. WELLS, M. D., Adjunct Professor of Diseases of Infancy and Obstetrics in the Philadelphia Polyclinic. Second edition, thoroughly revised and enlarged. Illustrated. Price, \$4.50. Philadelphia: P. Blakiston's Son & Co. 1901.

This manual of pediatrics, now in its second edition, certainly should be widely read by the student and practitioner. It is made up of over 900 well-written pages and contains illustrations elucidating the type very well. The vast subject of pediatrics has been treated as tersely as possible, yet nothing seems to have been neglected. We were particularly impressed with the able treatment of infant feeding, than which there is no more important subject in pediatrics. The diseases of children as described in this book are easily understood by the student; and the advanced worker, too, will be benefited by having such a condensed manual at his elbow. The chapters on insanity in children are well written and display rare intelligence on the part of the authors in putting them into the book—something which is usually omitted from these works on pediatrics. The subject of the treatment of rachitis is well taken up, and we heartily agree with the writers in their views on this subject. In short, the whole manual deserves unstinted praise.

A Manual of Practical Hygiene for Students, Physicians and Medical Officers. By CHARLES HARRINGTON, M. D., Assistant Professor of Hygiene in the Medical School of Harvard University. Illustrated with 12 plates and 105 engravings. Lea Brothers & Co., Philadelphia and New York.

This book is by far the best working manual of practical hygiene that has yet appeared in the English language. The subject is handled exceedingly well, and shows well that its author is a practical hygienist, and at the same time is perfectly familiar with allied branches which are so necessary for a full comprehension of the broad subject treated. It is thoroughly up-to-date. There is no verbosity. Enough is given to give the reader a clear idea of the matter in hand. There is a mass of information in the book that will prove invaluable reading for all medical men. The matter of water pollution and sewage disposal—all important topics at the present day in this land—are well discussed, and proper opinions on the same are given by the author. The reviewer has never seen a medical book which gave more satisfaction to indorse favorably than the work in hand.

The most Perfect Form of Dosimetry is afforded by

PARVULES

THE term Parvule, from *Parvum*, (small) is applied to a class of remedies (Warner & Co.'s) in the form of minute pills, containing minimum doses for frequent repetition in cases of children and adults. It is claimed by some practitioners that small doses, given at short intervals, exert a more salutary effect. Sydney Ringer, M. D., in his recent works on Therapeutics, sustains this theory in great variety of cases. 20 cents per 100.

PARVULES OF CALOMEL, 1-20.

MED. PROP.—ALTERATIVE, PURGATIVE.

Dose.—1 to 2 every hour. Two Parvules of Calomel, taken every hour until five or six doses are administered (which will comprise but half a grain), produce an activity of the liver which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

PARVULES OF CALOMEL AND IPECAC.

MED. PROP.—ALTERATIVE, PURGATIVE.

Dose.—1 to 2 every hour. Two Parvules of Calomel and Ipecac, taken every hour until five or six doses are administered (which will comprise but a grain of Calomel), produce an activity of the liver, which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

R Calomel, 1-10 gr.
Ipecac, 1-10 gr.

PARVULES OF ALOIN, 1-10.

MED. PROP.—A MOST DESIRABLE CATHARTIC.

The most useful application of this Parvule is in periodic irregularities—Dysmenorrhœa and Amenorrhœa. They could be given in doses of one or two every evening at and about the expected time.

Dose.—4 to 6 at once. This number of Parvules, taken at any time, will be found to exert an easy, prompt, and complete Cathartic effect, unattended with nausea, and in all respects furnishing the most aperient and cathartic preparation in use. For habitual constipation, they replace when taken in single Parvules the various medicated waters, reducing the quantity required by the latter as a dose, which fills the stomach and deranges the digestive organs.

PARVULES OF PODOPHYLLIN, 1-40.

MED. PROP.—CATHARTIC, CHOLAGOGUE.

Two Parvules of Podophyllin, administered three times a day, will re-establish and regulate the peristaltic action and relieve habitual constipation, add tone to the liver, and invigorate the digestive functions.

PARVULES OF NUX VOMICA, 1-50.

(WARNER & CO.)

Nux Vomica, according to Dr. Ringer, is possessed of real curative powers for sick headache, accompanied with gastric catarrh, whether due to error in diet, constipation, or to no apparent cause. He regards it, administered in small and frequently repeated doses, as useful in many disturbances of the gastric functions.

SUPERIOR TO PEPSIN OF THE HOC
INGLUVIN

A Powder—Prescribed in the same manner, doses and combinations as pepsin.

A SPECIFIC FOR VOMITING IN GESTATION IN DOSES OF 10 to 20 Grains.

WILLIAM R. WARNER & CO.

PHILADELPHIA
NEW YORK
CHICAGO

LARGEST PILL FACTORY IN THE WORLD.

For sale by all druggists or sent by mail on receipt of price. Physicians' private formulæ made up in lots of 25 and over. Pills, granules or compressed form. Write for quotations.

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

MEDICAL SOCIETIES.

The Mississippi Valley Medical Association.—The next medical society meeting of any importance will be the Mississippi Valley Medical Association, convening at Put-in-Bay, Ohio, September 12th, under the presidency of Dr. A. H. Cordier, of Kansas City.

Put-in-Bay is an ideal place for a medical meeting, the Hotel Victory being a splendid hotel and having an excellent convention hall.

The preliminary program includes the following papers:

1. Address in Medicine, by Frank Billings, Chicago.
2. Address in Surgery, by Reginald Sayre, New York City.
3. Address of President, A. H. Cordier, Kansas City, Missouri.
4. Pathological Cause of the Eruption in the Exanthemata, by J. M. Postle, Hinckley, Illinois.
5. Acute Intestinal Auto-Infection, by John M. Batten, Downingtown, Pennsylvania.
6. Surgery of the Palate, with Stereopticon Exhibit, by Truman W. Brophy, Chicago, Illinois.
7. Some New Remedial Agents in the Treatment of Gynecologic Affections, by Chauncey D. Palmer, Avondale, Cincinnati, Ohio.
8. Hematology, by L. H. Warner, New York City.
9. Surgical Treatment of Pulmonary Abscess, by D. N. Eisendrath, Chicago, Illinois.
10. The Severing of the Vas Deferens and Its Relation to Neuro-Psychopathic Constitution, by H. C. Sharp, Jeffersonville, Indiana.
11. Adrenalin, the Active Principle of the Suprarenal Glands; Its Mode of Preparation, by Jokichi Takamine, New York City.
12. Varicose Veins and their Treatment, by J. Lively Johnson, Louisville, Kentucky.
13. Subdural Hematoma from Pachymeningitis Hemorrhagica Interna, by Charles J. Aldrich, Cleveland, Ohio.
14. Some Obscure Injuries which Follow the First Toxic Action of Alcohol, by T. D. Crothers, Hartford, Connecticut.
15. Sterilization of Rubber Gloves, Catheters, etc., by Formaldehyd Gas; Correct and Erroneous Culture Tests, by A. Goldspohn, Chicago, Ills.
16. Auto-Intoxication and Its Treatment, by Charles H. Shepard, Brooklyn, New York.
17. Aboriginal American (Indian) Contribution to Therapeutics, by B. T. Whitmore, New York City.
18. The Bed-Treatment of the Insane, by Frank Parsons Norbury, Jacksonville, Illinois.
19. The Clinical Diagnosis of Carcinoma of the Esophagus and the Technique of Gastrostomy, by Charles G. Cumston, Boston.
20. Clinical Notes on Gleet, by A. Ravogli, Cincinnati, Ohio.
21. Dentists' Neck, a Hitherto Undescribed Neurosis, by Albert E. Sterne, Indianapolis, Indiana.
22. The Value of Mechanical Appliances in the Aid of Intestinal Suture, by Edward H. Lee, Chicago, Illinois.
23. A Discussion of the Morbid Conditions of the Upper Respiratory Tract Resulting from the Infectious Diseases, by Colus M. Cobb, Boston, Massachusetts.
24. Congenital Valvular Obstipation, by Thomas Charles Martin, Cleveland, Ohio.



MARCHAND'S EYE BALSAM

(C. P. Vegetable Glycerine combined with Ozone.)

THE MOST POWERFUL AND AT THE SAME TIME HARMLESS HEALING
AGENT KNOWN

Cures Quickly all Suppurative and Inflammatory Diseases of the Eye:

**Catarrhal Conjunctivitis or Ophthalmia,
Purulent Conjunctivitis, Ophthalmia in Children
Inflamed and Granular Eye Lids, Etc.**

Send for free 300-page book "Rational Treatment of Diseases caused by Germs," containing reprints of 140 scientific articles by leading contributors to medical literature.

Physicians remitting 50 cents will receive one complimentary sample of each, "Hydrozone" and "Eye Balsam."

Marchand's Eye Balsam is put up only in one size bottle. Package sealed with my signature.

Hydrozone is put up only in extra small, small, medium and large size bottles bearing a red label, white letters, gold and blue border, with my signature.

Glycozone is put up only in 4-oz., 8-oz. and 16-oz. bottles bearing a yellow label, white and black letters, red and blue border, with my signature.

PREPARED ONLY BY

DISTRIBUTING AGENTS:

Thomas Christy & Co., 25 Lime St., London, Eng.
Cleming, Miles & Co., 53 St. Sulpice St., Montreal, Can.
Eckett, Zeilin & Co., 220 Sutter St., San Francisco, Cal.
H. Buehler, 134 Lake St., Chicago, Ill.
John W. Lehman, 428 Camp St., New Orleans, La.

Charles Marchand

Chemist and Graduate of the "Ecole Centrale des
Arts et Manufactures de Paris" (France).

57-59 Prince St., New York.

SOLD BY LEADING DRUGGISTS.

AVOID IMITATIONS.

MENTION THIS PUBLICATION.

"When the digestive and assimilative powers are lowered less variety and less quantity of food can be tolerated, and foods that in health are never needed, may become necessary."

...SUCH A FOOD IS...

Extract of Plasma—"HENIUS"

A Yeast Food

EXTRACT OF PLASMA is neither a malt extract nor predigested food, but is an EXTRACT OF THE PROTOPLASM OF THE YEAST CELL, containing ORGANIC FORM, PROTEIDS, PEPTONES, ALBUMOSES and the TONIC PHOSPHATES.

"PLASMA IS THE PHYSICAL BASIS OF LIFE" (Huxley).

In utilizing EXTRACT OF PLASMA the physician avoids indigestible compounds and REVERTS TO THE FIRST PRINCIPLES OF CELL BUILDING, provided by nature.

Extract of Plasma is especially indicated in patients convalescing from fevers and wasting diseases in general, and in all conditions where nutrition is below par.

Sufficient quantity for trial, with literature, sent on request.

THE WAHL FOOD COMPANY, St. Louis, Mo.

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

25. Features Determining Permanency of Cure in Radical Operations for Hernia, by A. J. Ochsner, Chicago, Illinois.
26. Science and Christian Science, Their Claims and Miracles, by Paul Paquin, Asheville, North Carolina.
27. Gastric Lavage, Its Uses and Abuses, by Thomas Hunt Stucky, Louisville, Kentucky.
28. Some Causes of Ignored Syphilis and their Remedies; Clinical Examples Demonstrated from Lantern Slide Reproductions, by M. L. Heidingsfeld, Cincinnati, Ohio.
29. A Few Cases of Hysteria, by Hugh T. Patrick, Chicago, Illinois.
30. A New Method of Controlling Hemorrhage in Operations Upon the Head and Neck, by George W. Crile, Cleveland, Ohio.
31. Tripartition in the Study of the Female Pelvis, by A. Ernest Gallant, New York City.
32. Scientific Aids to Diagnosis, by Henry D. Holton, Brattleboro, Vt.
33. How Should Appendicitis Cases be Treated? by Joseph Price, Philadelphia, Pennsylvania.
34. A Case of Unilateral Fulminating Optic Neuritis Cured by Trephining the Sphenoidal Sinus, by J. O. Stillson, Indianapolis, Indiana.
35. Surgical Cases from a Medical Standpoint, by I. N. Love, New York City.
36. The Surgical Features of Typhoid Fever and Dysentery, by Hal. C. Wyman, Detroit, Michigan.
37. Surgical Intervention in Pulmonary Abscess, with Illustrative Cases, by W. J. Macdonald, Albany, New York.
38. Report of One Hundred Cases Operated for Appendicitis, by William J. Gillette, Toledo, Ohio.
39. The Surgical Treatment of Diseases of the Stomach, by A. Vander Veer, Albany, New York.
40. Some Indications for Gastroenterostomy, by William J. Mayo, Rochester, Minnesota.
41. The Young Doctor, by Emil Amberg, Detroit, Michigan.
42. Fractures, by E. B. Smith, Detroit, Michigan.
43. Cancer of the Uterus, by Louis Frank, Louisville, Kentucky.
44. Floating Liver, with Report of Case, by J. H. Carsters, Detroit, Michigan.
45. The Acquirement of Nervous Health, by F. Savary Pearce, Philadelphia, Pennsylvania.

And papers are promised by the following: H. N. Moyer, Chicago; N. Stone Scott, Cleveland, Ohio; C. F. McGohan, Bethlehem, New Hampshire; Javis N. Jackson, Kansas City, Missouri; H. B. Kinzer, Bristol, Tennessee; A. M. Phelps, New York, New York.

The Clover Leaf Route (St. Louis office 104 North Fourth street) offers good service for members leaving St. Louis, Train No. 6, leaving Union Station at 7:56 P. M., arriving at Toledo at 8:35 A. M., and connecting with boat arriving at Put-in-Bay at noon.

Tickets will be sold via Cleveland over the Big Four R. R. at one cent per mile, making the cost much less than one fare for the round trip. Three boats daily leave Cleveland for Put-in-Bay, making only a nominal charge for the trip. Tickets will be on sale September 8th to 12th, good returning until October 8th.

The extreme caution that is necessary in the treatment of anaemia and other wasting diseases during the heat of summer is the best justification for the almost universal use of Scott's Emulsion in such cases at that period of the year.

SCOTT & BOWNE, 409 Pearl street, New York.

Diet in Typhoid Fever

SUPPORTING the strength of the typhoid patient without overloading the stomach or fatiguing the intestine demands the most careful judgment on the part of the physician. The selection of a diet which will nourish the patient without giving distress, causing elevation of the temperature, or inducing diarrhœa presents a problem heretofore difficult of solution. The question has been satisfactorily settled in

PLASMON

A SOLUBLE, PURE MILK-ALBUMIN

ODORLESS, TASTELESS, NUTRITIOUS AND INEXPENSIVE
REPLACING ANY AND ALL OTHER NITROGENOUS FOODS



The ingestion of PLASMON even in the early stages of typhoid fever will not cause any rise in temperature; it nourishes the patient without overtaxing the digestive organs, stimulates the natural appetite, and if diarrhœa exists PLASMON has a tendency to check it without producing constipation.

PLASMON furnishes the system with the most essential constituent of the human organism, Albumin, and in a soluble, extremely digestible and highly assimilable form. It can be administered alone, or in combination with any articles of food. PLASMON is not a substitute for Albumin, but IS ALBUMIN, pure and simple. *Physicians are invited to send for samples, and prove for themselves that the claims made for PLASMON as a nutrient are based upon established facts.*

The AMERICAN PLASMON SYNDICATE, Ltd.

24 ASTOR COURT ~ ~ ~ ~ ~ NEW YORK CITY

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

FORMULAE.

Diarrhœa of Phthisis.

℞ Resin terebinth..... gr. iij
 Argenti nitrat.,
 Opii.....aa gr. ¼
 M. Sig.—One pill when needed.—ROOSE-
 VEILT HOSPITAL.

Summer Catarrh, or Hay Asthma.

℞ Potass. iodid..... ʒ j
 Liq. potass. arsenit..... ʒ j
 Aquæ..... ʒ iv
 M. Sig.—Teaspoonful every four or six
 hours.

This given internally; combined with
 following formula for local use, applied by
 means of post-nasal syringe:

℞ Tinct. iodinii..... ʒ j
 Acid. carbol..... gtts x
 Aquæ distillat..... ʒ iv

M. Sig.—Apply with post-nasal syringe.
 —BARTHOLOW.

Malarial Enlargement of Spleen.

℞ Quininæ sulphat..... ʒ j
 Ferri sulphat. exsiccet..... ʒ iss

M. ft. pil. No. xxx. Sig.—Four or five
 pills during day.—BARTHOLOW.

Diarrhœa of Typhoid Fever.

℞ Ac. sulphuric aromat..... ʒ j
 Ext. hæmatox fl..... ʒ ss
 Spts. chlorof..... ʒ ss
 Syr. zingiberis..... ad ʒ iij

M. Sig.—Two teaspoonfuls every two to
 four hours.—HARE.

Fœx Hæmoptysis.

℞ Acid. gallici..... ʒ ij
 Acid. sulph. aromat..... ʒ j
 Glycerinæ..... ʒ j
 Aq. distillat..... q. s. ad ʒ vj

M. Sig.—Teaspoonful at doses; repeat
 frequently.—PEPPER.

Wounds of Veins.—Wounds of
 veins are of importance both on ac-
 count of the immediate and the re-
 mote effects they produce. The
 immediate troubles which have to

be dealt with are (a) dangerous
 hemorrhage, and (b) entry of air
 into the vein. The remote troubles
 are chiefly thrombosis, embolism,
 pyæmia and œdema of the part cor-
 responding to the distribution of
 the vein. The immediate troubles
 are more common in connection
 with operation wounds, the remote
 troubles in accidental wounds.—
Cheyne and Burghard, Med. Record.

**Cocaine in the Treatment of In-
 testinal Wounds.**—One of the in-
 conveniences attending the use of
 the anthelmintics ordinarily em-
 ployed, particularly of extract of
 male-fern, consists of the vomiting
 following the taking of the me-
 dicament. In a case of this kind,
 where the extract of male-fern was
 not well borne by the stomach,
 Flesch had recourse to the admin-
 istration, in addition to the male-
 fern, of a solution of cocaine, of
 which the patient took a few drops
 from time to time in a little water
 before and during the ingestion of
 the capsules of extract of male-fern.
 The solution of cocaine Flesch em-
 ployed is formulated as follows:

℞ Cocaine.....grs. 2¼
 Ext. belladonna.....grs. 3
 Aq. valerian..... ʒ 2½

The patient took in all five centi-
 grams of cocaine. A purgative,
 calomel, given some hours later,
 brought about the expulsion of the
 tenia. The patient was kept in bed
 during the twenty-four hours that
 the treatment lasted.—*Exchange.*

The SUPRARENAL CAPSULES in the Treatment of HAY FEVER and DISEASES of the HEART

"The Suprarenal Substance is in my experience a specific for the symptoms of hay fever, and a remedy to rapidly and surely restore the condition of the nasal erectile tissue."

"The Suprarenal Substance is an ideal heart stimulant. No other drug can compare with it for rapidity of action, strength, efficiency and safety combined."

The Suprarenal Substance should be given in 5 to 10-grain doses in capsules which are chewed and swallowed without water.

SAMPLES AND LITERATURE UPON RECEIPT OF PROFESSIONAL CARD

ARMOUR & COMPANY C H I C A G O

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

NEW REMEDIES.

Protan.—(A new intestinal astringent introduced by H. K. Mulford Company, of Philadelphia, Pennsylvania.) Protan is a definite chemical compound formed by the synthesis of tannic acid with nuclo-proteid, containing fifty per cent. of tannic acid. It forms a light brown powder, is tasteless, odorless and entirely free from astringent action upon the mouth and stomach. It is insoluble in water, acid solutions, or the gastric juice; does not coagulate albumen nor precipitate pepsin or peptones; is unaffected by the gastric juice and passes through the stomach chemically unchanged; it is, therefore, entirely free from deleterious action upon the stomach and processes of digestion.

Protan first evolves its active astringent ingredient, tannic acid, when it reaches the small intestine and comes in contact with the alkaline pancreatic juice. Free tannic acid is but very slowly evolved from protan as it passes downward through the intestines, so that its astringent action is manifested throughout the entire intestinal tract. This fact is verified by the appearance of minute quantities of both protan and tannin in the feces.

Protan owes its influence to the presence of tannic acid so combined that this body reaches the intestines chemically unchanged. The astringent action of tannin, as all authorities agree, is due to the fact that it precipitates (coagulates) the albuminoid bodies of mucous membranes, which coagulation leads to an actual shrinkage of the structures with constriction of the capillaries and diminution of secretion. When tannic acid is administered by the mouth, those changes take place in the stomach, so that not only is the gastric mucous membrane and the process of digestion seriously impaired, but the tannic acid is decomposed by the gastric juice into gallic and pyrogallic acids, which are non-astringent; hence, very little, if any, of the tannic acid reaches the intestines in a chemically unchanged (astringent) form. Protan, on the contrary, passes through the stomach in its original form and presents to the intestines a definite amount of tannic acid chemically unchanged and actively astringent. The well-known properties of tannic acid towards albuminoid bodies are here manifested: The growth of bacteria is hindered, their toxins rendered inert, the intestinal mucous membrane is contracted, covered with a superficial coagulum, capillaries constricted and the exudation of leucocytes prevented. Thus is explained the remarkable clinical value of protan in all catarrhal and ulcerative conditions of the intestines, associated with diarrhea.

Protan is furnished in powder form in one-ounce cartons, for dispensing in cachets, capsules or powders. Protan is also furnished in friable tablet form and in combination.

Interstate Medical Journal.

VOL. VIII., NO. 9. SEPTEMBER, 1901.

Issued Monthly for One Dollar a Year.

EDITORIAL DEPARTMENT.

WARREN B. OUTTEN, M. D.,	-	-	-	} EDITORS.
WILLIAM PORTER, M. D.,	-	-	-	
R. B. H. GRADWOHL, M. D.,	-	-	-	
OTHO F. BALL, M. D.,	-	-	-	
				MANAGING EDITOR.

Address all communications, news of medical interest, subscriptions, etc., to the INTERSTATE MEDICAL JOURNAL CO., COMMERCIAL BUILDING, ST. LOUIS, MO.

ORAL SEPSIS.

In these days of extreme antiseptic care it sometimes happens that a surgeon will have a series of most unfortunate results. Patients will die with all of the symptoms of sepsis, and yet the operator will assume to have used every care. Indeed, so far as attention to his hands, instruments, solution, attendants, the patient and the room, he has left nothing undone. It is probable that the patient was in the average condition of strength and recuperative power, and that the operation was not extremely dangerous.

Dr. Hunter, of London, has recently written a monograph upon oral sepsis, which is suggestive. It is true that he studies this subject in its causative relation to gastritis, toxic neuritis and other septic conditions, but surely his field can be greatly enlarged. If, as he seems to prove, from local infection, such as dental caries, tonsillitis, pharyngitis and ozena, there may result a general auto-infection, is it not more than possible that many cases of sepsis may be the result of infection conveyed by the breath of the operator to the open wound of the patient?

This opens up a very serious question. One of the most accomplished surgeons the writer has known had a most offensive breath from long-standing chronic pharyngitis. His results in certain operations were most disappointing—many of his patients dying from sepsis. We have seen scales of dandruff fall from the head of an operator, and drops of perspiration from his face, into an abdominal cavity. His hands were scrupulously clean, but his head and face doubtless contained many germs.

We are neither captious nor critical, but we insist that the guarding of the patient from the danger of infection from the breath and other carriers for infection from the operator is not a small one. And it is all so easily prevented. A towel around the head; a mask covering all the face but the eyes, readily made and easily adjusted; these or similar appliances would undoubtedly be additional safeguards in all important operations.

A TYPHOID-LIKE BACILLUS CAUSING A TYPHOID-LIKE FEVER.

Typhoid fever is protean in its manifestations, in its onset and in its decline. Yet so far as the writer knows we have had no cases in this country of a disease which has been reported from Bremen, Germany. In the *Deutsche medicinische Wochenschrift*, Nos. 30 and 31, 1901, Kurth reports five cases of a disease which resembles typhoid fever very much and which he believes is caused by a hitherto undescribed micro-organism, the bacillus bremensis febris gastricæ. The cases reported show clinical histories not unlike those of genuine typhoid fever. Temperature curves are parallel to those of typhoid fever. There was present even the roseola of typhoid. The urine contained albumen and showed the diazo reaction. Withal, the cases were benign cases, all ending in rapid recovery.

The bacillus which was found in these cases closely resembled the bacillus typhosus. It grew similar to the bacillus typhosus on gelatin plates. It did not liquefy gelatin. It clouded broth in twenty-four hours, with the formation of a pellicle afterwards. It gave no indol reaction. It did not stain according to Gram. It produced gas: a point of difference with the typhoid bacillus. It produced acid in media. Furthermore, it clumped in the presence of blood from these cases of typhoid-like fever. It is noteworthy that this clumping took place quickly even in the presence of a dilution of 1 to 100. All in all, the bacillus resembled very closely the bacillus enteridis of Gärtner.

The disease, while it resembled typhoid fever very much, took on the characteristics of what Kurth calls "gastric fever." He surmises that the disease may have been epidemic in Bremen at the time that he saw the five cases reported, which were brought to the hospital. There were over one hundred and fifty cases of typhoid fever in Bremen in that season, and it is not improbable that some of those which went for typhoid fever were really cases of this disease. The disease probably bears somewhat of a relationship to typhoid fever because it resembles it clinically, and secondly because the bacillus bremensis febris gastricæ appears to be a variety of the same family to which the bacillus typhosus belongs. Kurth said, moreover, that at times blood from these cases showed a slight reaction in contact with typhoid bacilli.

SUBSTITUTION IN PRESCRIPTIONS.

We have been asked to say a word on this subject. There is no word in the English language sufficient. It is the vilest, the most reprehensible,

the lowest and meanest of all mean acts. It is a breach of trust; it is selling goods under false pretense; it is more than stealing.

A patient comes to a physician for the best advice and the most effective medication. He needs it and pays for it. The physician, after investigating the case, gives him an order for certain drugs which he believes suitable to that particular case. By so doing he puts his own reputation and the highest welfare of the patient into the hands of the druggist. In all honor and honesty the druggist should fill that prescription as it is written. If he cannot, he should refuse to fill it or notify the physician.

How often is this confidence violated! A \$40 drug clerk may, for the sake of a few cents' profit, nullify the work of the physician, injure his reputation and do infinite harm to the patient.

We believe that substitution is on the increase. Physicians can stop it if they will. It is proposed to have united action all over the country. In some places physicians have agreed to file a list of druggists found guilty with the secretary of the local medical society. It would be just, perhaps, to always notify suspected druggist.

The writer has a list of all the druggists in the city. When there is evidence of substitution by any one, the red line drawn underneath the name means "no more chances in that store."

It is our own fault if we are cursed with this evil, and we have the remedy at hand.

CHANGES IN THE PANCREAS IN DIABETES MELLITUS.

The association of lesions of the pancreas and diabetes mellitus has been frequently noted. Minute study of such cases has never been productive of general conclusions. It has been the rule, however, that when the pancreas shows changes in cases of diabetes mellitus, that change consists in a chronic interstitial inflammation. Eugene Opie, of the Johns Hopkins Medical School, has recently described a case of diabetes in which the pancreas showed sharply circumscribed areas in which between the capillary wall and the parenchymatous cells hyaline material had been found. In a case which he reports in the *Johns Hopkins Hospital Bulletin* for August, 1901, most important findings are described by him. The case was one of diabetes mellitus in a negress, the urine showing from 4 to 5.4 per cent. sugar. Microscopical examination showed that in almost every island of Langerhans there was a homogeneous hyaline material replacing the epithelial cells. It stained deeply with acid dyes, eosin and picric acid. Transitions between the granular nucleated cells and these homogeneous hyaline particles were found. Where the process was more advanced, the cells of the island were more or less wholly transformed, and there occurred small, round or oval masses of hyaline material, penetrated by the remains of capillaries whose endothelial cells finally disappear. The secreting parenchyma was unaffected by the lesion described.

This case, therefore, shows a lesion of the islands of Langerhans

alone, in a case of diabetes mellitus. Opie says that diabetes mellitus, when the result of a lesion of the pancreas, is caused by destruction of the islands of Langerhans and occurs only when these bodies are in part or wholly destroyed.

ANOTHER CHAPTER ON THE ILLUSIONS OF PATHOLOGY — SCHÜLLER'S CANCER PARASITE.

The medical profession is ever struggling to solve intricate problems of etiology. One problem which is receiving quite a good deal of attention is that of the nature of cancer. From time to time divers micro-organisms have been brought to the notice of the profession by ardent investigators, each of whom has enthusiastically announced that he has found the long-sought-for parasite. Gaylord thought he had found it, but his work has not been very graciously received by his fellow-workers, inasmuch as it lacks scientific method and positive results. The very latest exhibition of enthusiasm (minus scientific thought) is that evinced in the lately appearing book by Prof. Schüller, of Berlin, on the parasite of cancer. In this book Schüller sets forth that he has found a parasite in cancer; that he is able to demonstrate it not only in fresh specimens, but also in any preparation of cancer which has been lying in alcohol in a pathologic museum for years.

Völcker, of the Heidelberg Surgical Clinic, undertook to investigate this "parasite" in cases of cancer. His investigation is set down by himself in a rather humorous manner in the *Deutsche medicinische Wochenschrift*, No. 30, 1901. Völcker searched high and low for the parasite, but for the life of him he could not find it. Schüller described them in his book as very large, gold-brown spheres, with clear membranes showing radiating pores. Some of the membranes seem to be empty, the "young form of the parasite" having escaped therefrom. After assiduous search, Völcker took a bottle containing bergamot oil which had been standing in the laboratory some time and touched the cork stopper to a cover glass, which was then examined under the microscope and found to be full of the "parasites" described by Schüller! It may here be stated that Schüller said in his work that the addition of a drop of bergamot oil to any specimen of cancer to "clear it up" would show the cancer parasites.

The explanation was thus ingeniously found by Völcker: the cancer parasites described by Schüller were merely oil droplets, while the large, empty capsules were cork cells. Schüller stated that his cancer parasites were resistant to all acids, potassium hydrate solution, etc. This agrees with what Zimmermann has said in his *Botanische Mikrotechnik*: "Cork membranes are not soluble in strong acids or in potassium hydrate solutions, nor do they stain with iodine." So it seems that the discovery is no discovery at all, but merely the detailed description of an antefact. Corroborative evidence of the work of Völcker is also to be found in the

Muenchener medicinische Wochenschrift for August 15th, where Hauser reviews Schüller's work and states that he too made the discovery that these are parasites of "cork."

THE PREVENTION OF THE SPREAD OF DISEASE BY RATS.

Rosenau, of the U. S. Marine Hospital Service, has issued a report on his work with the substance known as Danyz's virus applied to the destruction of rats. It is now definitely known that rats are the carriers of some epidemic diseases, notably the bubonic plague. Acting on this conviction, J. Danyz described a new method for the destruction of these disease-breeding rodents (*Annales de l'Institut Pasteur*, April, 1900) by means of cultures of a certain bacillus. This bacillus he obtained from a spontaneous epidemic among harvest mice and by means of complicated and artificial methods he managed to increase its virulence so that it became pathogenic for the several species of rats.

The great drawback to the practical utility of the "rat virus" is the fact that it rapidly attenuates, and, secondly, the resistance of the rats seems to increase when it is used upon them. This renders its usage as an agent for the wholesale destruction of rats rather limited. Rosenau's work was carried out with the idea of ascertaining just what value the virus has for the killing of rats. After many experiments he concludes that the virus, which is chemical poison, has feeble power of propagating itself from rat to rat. It therefore cannot produce a wide-spread epizootic among these rodents. In practical use it must be spread around so that many rats can get it.

The virus differs from most chemical poisons in that it is harmless for man and many of the domestic animals. It has the great disadvantage that chemical poisons do not possess, of rendering the animals immune by the ingestion of amounts that are insufficient to kill, or by the ingestion of cultures that have lost a little of their virulence. In the experiments made by Rosenau, less than half the number of rats fed were killed (46 out of 115). The conditions in a cage are so much more favorable for the fatal action of the virus than could possibly be the case in nature, that it is safe to assert that a less number would succumb in a wild state. *Ergo*, the virus is far from a sure means of exterminating rats in a particular place.

INSANITY IN BANK OFFICIALS AND BANK FAILURES.

It is noteworthy that recently several banking institutions have been practically wrecked through the squandering away of the funds entrusted to them by their cashiers who were afflicted with well-advanced paretic dementia. A Poughkeepsie bank cashier was suddenly noticed to become very extravagant. This led to an investigation and a defalcation was found. On examining the cashier's house, notes, drafts and money were found scattered over it, hidden in out-of-the-way places, in some cases

evidently for several years. The man was found to be afflicted with well-marked parietic dementia and was committed to an insane asylum.

Now, an important question leading up to these circumstances is that discussed in the *Alienist and Neurologist* for July, 1901—*i. e.*, the question of taking the evidence of non-medical persons as final in the passing on a given individual's sanity. It is reasoned that if, in cases of this kind, bank officials are daily in touch with their cashiers and fail to detect palpable evidences of the existence of such a well-marked disease as parietic dementia, how can we accept the evidence of laymen whose only interest in given individuals is purely personal? One would judge that if laymen fail to detect insanity in individuals who are concerned with their most vital interest, namely pecuniary interest, they are in no way capable of passing on the insanity of people whom they observe but casually. If keen business men fail to find evidences of insanity in cases where their interests are deeply concerned, how little value can be attached to their negative evidence in cases where their personal interests are not concerned, but where life or death or personal property are at stake. It is utterly absurd for courts of justice to accept the negative evidence of the laity on a given case of insanity, when we know of instances of this kind in which they fail to detect a form of insanity which to the medical mind is plain.

THE FILTERS SUPPLIED TO THE TROOPS IN SOUTH AFRICA.

The *Lancet* for August 10, 1901, discusses editorially the merits of the filters supplied to the troops in South Africa. It seems that they were supplied with filters for the purification of their drinking water, and that tests showed that these filters were permeable for bacteria, notably the typhoid bacillus. It seems that the troops, relying on the efficacy of these filters, drank the water supplied to them with a false sense of security. Hence, typhoid fever and other intestinal troubles were flourishing right through the campaign.

The problem of supplying troops in the field with a purified drinking water is a difficult one, but it seems to us, in the light of present knowledge on the subject, that the War Office was grievously in error in supplying an army in the field with portable filters for the purification of their drinking water. The model used was probably of the domestic filter type commonly used in the households of this country. We have but little confidence in these filters for the removal of pathogenic bacteria. They are excellent clarifying agents, but poor bacteria-removers. It was absurd for the War Office to countenance the use of such instruments. It was almost criminal for the medical men—if such is the case—who advocated the use of these filters. Far better would it have been had the drinking water been *boiled*. We are sure that boiling water kills bacterial life; we are not sure that filtering water removes them. From a scientific, economic and practical standpoint, boiling the water would

have been the measure of choice in this case. Some one has blundered again, and some one should bear the blame for the lives needlessly sacrificed for this blunder. The scientific world struggles with painstaking efforts to make propositions of this kind clear to the "powers that be" and then, behold, their directions are disregarded and, as the showman would say "a spectacular tragedy" takes place. We say again, let us place no blind faith in filtration of water. We say again, there never was a filter, either on a domestic or large scale, which removed every bacterium in a given supply. But it is a fact that boiling water kills bacterial life. Why, then, should there be any doubt as to the choice?

DIFFERENTIAL DIAGNOSIS BETWEEN TYPHOID FEVER AND APPENDICITIS.

We have heard much concerning the differential diagnosis of appendicitis and right-sided pyosalpinx and other conditions found in the right iliac fossa, but we have heard comparatively little concerning the differentiation of typhoid fever from inflammatory conditions about the appendix vermiformis. A rather unique form of typhoid fever it must be that would simulate appendicitis, and yet this *does* occur. We are in receipt of a communication from our good friend, Dr. Richard Mühsam of the Moabit Hospital, of Berlin, in which he details a case of typhoid fever that simulated appendicitis so closely that operation for that disease was done. The history of the case was not at all suggestive of typhoid fever, the most conspicuous deviation from the regular type of the disease being its beginning with a severe chill. Then again, the facial aspect, the roseola and diarrhea was absent. Pain, tenderness and a sensation of a mass in the right iliac fossa at McBurney's point pointed to appendicitis. At the same time there was no diazo reaction and no splenic tumor. In short, the case was an extremely atypical one, and the probable diagnosis of appendicitis was made; operation was performed and the true state of affairs immediately discovered. An ulcer was found which seemed to be quite near the serosa so that a row of sutures was placed in the gut at this point. The appendix vermiformis was quite normal. The abdomen was sewn up. The later course of the disease was uneventful, the patient going through the attack successfully. On the eleventh day the Widal reaction showed a positive microscopic result, but no macroscopic reaction. Roseola and splenic tumor later developed. Diazo reaction continued to be present.

This case is an extremely important one, because it touches on a point upon which not much stress has hitherto been made, namely, the probability of some cases of atypical typhoid fever being simulative of appendicitis and operated upon for that disease. The case reported by Mühsam went on to recovery, but a similar case reported by Rendu succumbed to the malady. It might be well for all practitioners to bear this case in mind at the present time, when typhoid fever is making its annual visit with us.

FORMIC ALDEHYDE IN THE TREATMENT OF TUBERCULOSIS.

The field of usefulness of formic aldehyde seems to have no limit. Its usage in histological work at first seemed to be its chief plea for remaining on our shelves; then began its use in disinfection work whereby singularly effective results were obtained. No other important use was found for it until Dr. Green, of Salisbury, advocated the treatment of throat and lung diseases—especially pulmonary consumption—by inhalation of formaldehyde. Since his first published observation in this regard others have come to the front with statements that good results could be obtained in incipient phthisis by such inhalations. The most startling communication, however, is that made recently in the *Philadelphia Medical Journal* (August 31, 1901) by Dr. Crowry Muthu, of St. Lawrence. This observer reports his results with inhalations of formic aldehyde as an aid in the open-air treatment of pulmonary tuberculosis. He reports fifteen cases which were under his observation for three to five months. All of them were patients who took the open-air treatment in Muthu's sanitarium for from six to eleven months. No other medication was taken by them other than the formaldehyde inhalations. The results obtained are briefly these: five were completely *cured* (italics ours). The writer states that neither physical signs nor tubercle bacilli were present at the end of treatment (it is presumed that both were present prior to treatment). Seven were "almost" cured, a few crepitations and bacilli remaining when they left the sanitarium, but since then they have all continued in good health. One patient was but slightly benefited. Two patients were not appreciably helped.

These results are truly remarkable, if we take the same stand that Muthu does—*i. e.*, that the good effects seen were attributable mainly to the formic aldehyde inhalations. At the same time we must bear in mind that each one of these patients had the benefit of the general open-air treatment, given in a well-equipped sanitarium. We may take the view that the maximum amount of good was achieved through general open-air treatment, the minimum being received from the medicated inhalations. This is an extremely conservative estimation, and in the light of that fact we cannot urge too strongly the necessity for others who are occupied with the sanitarium treatment of tuberculosis to follow in these lines and publish their results. From a purely theoretical standpoint, inhalations of formic aldehyde are indicated in the treatment of a disease of the nature of pulmonary phthisis. Such results demand repeated trials on the part of others. In the paper quoted not much information is to be gleaned from the *status præsens* of the patient prior to treatment as to the extent of pulmonary tissue involved, etc., but the remarkable findings at the close of treatment may mean much to those of us who are fighting with the great foe—tuberculosis.

ORIGINAL ARTICLES.

NEURASTHENIA.

BY SANGER BROWN, M. D., of Chicago.

IT MAY be assumed that in health the neurons are all the time appropriating from the vital fluids circulating among them an organic substance which, in passive states, is utilized in maintaining in them a condition of tone or latent energy, and which during activity enables them to render this energy properly manifest.

In the discussion of this particular phase of neuro-physiology, it would be eminently convenient and conducive to clearness, in my opinion, if some single term were available satisfactorily descriptive of this substance; and, accordingly, for this purpose I have ventured to coin the word *neurenergen*,* which I would define as an ultimate form of organic matter contained in the neuron through whose agency it is convertible into waste products and the various manifestations of nervous energy peculiar to its structure. It bears, indeed, much the same relation to neuro-physiology that lines and points bear to mathematics, each representing a mere concept. When, however, the vast benefit which has accrued to general medicine from the germ theory and to neurology from the neuron doctrine is remembered, toleration and perhaps even respect for a mere hypothesis may be entertained.

Let me now invite attention to figure 1: "a" represents a motor cell from the lumbar region of the spinal cord of a dog which had not recently taken any considerable exercise; while "b" represents a cell from the same part after fatigue. Here, it is fair to assert that there has been a discharge of energy coincident with a metamorphosis—apparently retrograde—of cell contents; essentially, in fact, of the substance which I have named *neurenergen*.

It is admissible, I think, to transfer the doctrine which these figures teach to neuron bodies or nerve cells generally, no matter what their peculiar function may be. Thus I recently made the following observation: two well-matched and skillful chess players, between whom there was a wholesome rivalry, sat down to a contest at two and played steadily till five-thirty, each one in the meantime exercising all the intellectual concentration of which he was capable. During the first twenty minutes the calculations were rapid, sound and far-reaching. At about the close of the seance a marked decline in the character of the play was only too obvious. Pieces were left directly exposed for several consecutive moves, and even the most patent possible check was overlooked by both players. That the

* Derived through the Greek from *neuron*, nerve; *ergon*, work; and *genesis*, source.

neurons concerned in the prolonged intellectual struggle had undergone changes similar to those delineated in the figure is, in my opinion, a not unreasonable supposition. It is not claimed for a moment, however, that the figures here shown afford anything like an identification or demonstration of this substance. They are merely intended to give color and support to the hypothesis; and, in my opinion, this they do.

Without wishing to express disapproval of the idea I shall, for the present, ignore all contention implying that any fixed anatomical elements outside the neurons participate materially in the immediate development of nervous energy.

According to the foregoing concept, then, there is in health a current of neurenergen constantly flowing into the neurons, which is no less constantly transformed by them into energy and waste products. This current is at its minimum during repose, and at its maximum during activity; and, furthermore, subject, no doubt, to wide individual differences, there must be an available neurenergetic reserve which may be drawn upon as occasion demands.

I shall not now attempt the further general development of this doctrine, but merely suggest, in passing, that it offers a rational explanation for many morbid nervous phenomena besides those now under discussion, notably those of epilepsy and the tremors; while it finds application in conditions as widely separated as the toxic and toxemic paralyses and insanity.

To make a special application of this doctrine, it may be postulated that in neurasthenia, on account of overstimulation, the neurons giving rise to the symptoms have lost, to a considerable extent, their recuperative power; that there is, in fact, a standing deficit in their neurenergen and that they remain, therefore, in some degree permanently in the condition of the cell shown in "b." Or, in other words, inasmuch as the salient feature of neurasthenia consists rather in the inability to sustain motor or mental effort than in derangement or disorder of the energy produced, the cause of the symptom may be more reasonably referred either to a deficiency of the available supply of the neurenergen or to weakness of the neurons, whereby they are unable to continue its proper metamorphosis, than to some abnormal quality of these elements, as may be assumed to exist in epilepsy, for instance, where the neurenergen, on account of a morbid chemical alteration, may undergo a very sudden change, almost akin to explosion.

Clinical experience, moreover, would appear to some extent to endorse this view of the pathology, because some sort of excitement of the neurons, which might be expected to produce in them a condition of more or less permanent exhaustion, appears to be the most potent cause of the disease, while tranquillity rather than drugs or nutritional measures is the first essential of successful treatment.

The exciting cause, then, may be looked for in those influences which

demand an exhaustive expenditure of nervous energy beyond the capacity of coincident and consecutive restoration or repair. Within the limits of this paper these can only be referred to in the most general terms. However, it is readily perceived that they are all the time rapidly increasing in professional, business and social life. The march of scientific progress is so rapid that the professional man has to maintain a high state of mental tension in order to keep pace with it, notwithstanding the mitigation afforded by specialism.

Refinements in business methods, with the development of devices providing means of constant intercommunication, expose the business man to incessant drafts upon his capital of nervous energy; while keenness of competition, the added responsibility of success, as well as the anxiety and depression incident to failure, all contribute to neurenergetic bankruptcy. Indeed, in this connection the excessive indulgence in secret vice, as illicit venery, sometimes practiced by the overworked business or professional man, might consistently be termed neurenergetic defalcation or, in lesser degree, speculation. But if the increasing complexities of modern civilization offer a menace to the neurons of business and professional men which may fairly excite concern, what shall be said of their effect upon the neurons of the modern society woman, with her perpetual breakfasts, luncheons, receptions and card parties; her clubs with their educational, municipal and philanthropic departments? And even under the weight of these great burdens, yielding to primitive impulses, she may attempt to divert some energy to the family circle, as, for instance, personal supervision of the house-keeping, the training and education of her children, etc. In her efforts to meet all these demands, besides many others which I have not enumerated, her liability to neurasthenia is positively alarming, and accordingly, sooner or later, she is likely to register at a rest-cure.

Some of the severest cases of neurasthenia develop rather rapidly after an emotional or physical shock, and when these causes act coincidentally their influence is powerfully intensified. The symptoms supervene sometimes within a few hours, sometimes within a few days or weeks of the exciting cause. There may or may not be some local demonstrable tissue injury, as contusion or fracture. Railroad accidents furnish conditions peculiarly favorable to the united action of these causes, and on account of the volume of railroad travel they contribute largely to the list of these cases.

Inasmuch as the symptoms of neurasthenia are in any event mainly subjective, it is many times well-nigh impossible to form a correct estimate of the actual condition of the patient, especially in the face of impending litigation; and when the truth of the statement is admitted, as I believe it deserves to be, that all of the exciting causes of neurasthenia likewise favor the development of hysteria, and that the latter is frequently a conspicuous complication of the former, the far-reaching influence of pros-

pective damages upon the severity and persistence of the symptoms may be the more readily appreciated. Notwithstanding all these very weighty considerations, however, I have not only once but repeatedly seen undoubted cases of severe and protracted neurasthenia result from these causes, alone or combined, when there could be no possible motive for deception.

Now and then cases are met with in which well-marked symptoms have developed independent of exciting cause; cases which, in the present state of our knowledge, may properly be termed idiopathic.

As to predisposing causes, age may be first considered. The active period of adult life furnishes a large majority of the purer cases, mainly because at this time the individual exposure to exciting causes is at its height. Although it does not articulate very nicely with the division of the subject just announced, I will here make the somewhat paradoxical statement that a rather exceptional endowment of systemic qualities, upon which a satisfactory state of the general health depends, has to be presupposed in all cases of neurasthenia; otherwise the influence which finally results in its production would first produce some other sort of disease demanding a corresponding compromise in the diagnostic designation. For as I understand the term neurasthenia, it is only properly applicable when the symptoms cannot be regarded as the result of some other well-recognized morbid entity. However, its associations, if not indeed affiliations, with hysteria are often so intimate as to make any attempt at classification within the limits of established nomenclature unsatisfactory. Now one, then the other, predominates. If cases not manifestly marked with hysteria be excluded, it occurs oftener in men than in women; otherwise I think the order of frequency would be decidedly reversed.

There is a large and perhaps increasing proportion of individuals in every civilized country, mainly among the middle and upper classes, in none of whose organs actual disease can be demonstrated. They are not insane nor yet imbecile; but they lack endurance and stamina to such an extent that they are always more or less dependent on some one, no matter what educational and hygienic advantages may have been extended to them. The condition is permanent. It may have been present from birth, in which event it might properly be regarded as congenital or hereditary; or it may have resulted from some severe disease occurring during the period of development. None of these cases, in my opinion, however neurasthenic, should be included in the present discussion; and if they be ignored, the influence of heredity in neurasthenia is certainly not very marked.

Temperament, in proportion as it prompts the individual to expose himself to the exciting cause, would perhaps have to be reckoned with as an indirect predisposing etiological factor; but when it is remembered that the cases above referred to resulting from shock observe no very marked

discrimination determined by temperamental differences, this element cannot be accorded a very prominent position as a predisponent.

SYMPTOMS.

The symptoms, even exclusive of such associated conditions as hysteria, are sufficiently diversified. For convenience of discussion only, though as a matter of fact they are all more or less intimately combined, they may be separated into motor, sensory, mental and vegetative—if, indeed, it be permissible to speak of digestive and circulative disturbances as vegetative.

Motor.—The purest example of this symptom is seen in the so-called “stale” athlete. His muscles may still appear firm and prominent, but feats of strength and agility which formerly he could repeat in rapid succession and with pleasure, can now, perhaps, be performed once or twice at most, and then only at the cost of distressing effort and subsequent exhaustion. Generally in practice, while motor symptoms are distinct, their prominence is more or less relieved, if, indeed, they are not considerably obscured, by other phenomena, though women frequently enough complain that they are greatly exhausted by making the most simple toilet, walking across the floor or even sitting up. Apart from hysteria the reflexes are more likely to be minus than plus. Intention, tremor and inaccuracy of movement rapidly supervene upon voluntary effort, but there is never true ataxia, spasm or paralysis, nor are the sphincters ever involved.

Sensory.—Unlike its associate, hysteria, neurasthenia presents no pathognomonic sensory symptoms; indeed, none which are very strongly diagnostic. In severe cases rather pronounced numbness of the extremities, extending to the knees and elbows, may alarm the patient until he is reassured, and the same may be said of ulnar paresthesia. The head is pretty generally complained of. The suffering is voted much worse than pain, and many patients express a strong conviction that their brain is paralyzed. This is probably suggested by the vivid sense of mental impotence which supervenes when a sustained intellectual effort is made. A dull, distressing sensation, relieved by pressure, extending from the suboccipital region (“base of the brain”) to the lower angle of the scapulæ is very common.

Mental.—Most frequently the first and most troublesome annoyance consists in maintaining the attention while reading. The patient cannot continue more than a few moments with satisfaction. Memory impressions are so transient that the thread of the composition soon separates, and finally, after repeated attempts at concentration, the exercise has to be abandoned. The same is true of other forms of mental effort. Confusion, fatigue and failure ensue when a mental or intellectual process demands nice discernment and extended co-ordination of ideas. Apathy and inability are often combined. The generous perseverance of members of the family to induce the patient to participate in his former mode of diver-

sion may provoke an unexpected display of temper. There may be no more depression than might be fairly set down to the discouragement naturally resulting from conscious incapacity. The simple melancholiac, on the other hand, does not know why he is depressed. He seeks solitude from a strong, innate dread of meeting people, not because he wishes to avoid fatigue; neither is it for the latter reason that his responses to simple questions are delayed or that he shamefully neglects his personal appearance. The neurasthenic may not be able to sit through a play without finally suffering greatly from fatigue, mainly mental. The melancholiac suffers no exhaustion from such an effort, but the performance no longer appeals to him. His capacity for enjoyment in this and all other directions is more or less profoundly reduced, and not, apparently, from a too ready exhaustibility of the neurons concerned.

The Special Senses.—Ocular fatigue has already been mentioned. Otherwise disturbances in this direction are not very notable or characteristic. I have met with several cases in this disease in which the sense of smell seemed too strongly accentuated—the patient would get off a car, for instance, rather than pass too near a garbage cart, which I could not, as I might have expected, fairly charge to hysteria.

Vegetative.—In many cases sleep is fairly good. Insomnia in some form occurs often enough, however. It is rarely very severe. Most frequently it is the sort in which the patient falls asleep promptly on retiring, but awakens too soon and then remains awake for several hours. This is perhaps somewhat suggestive of neurasthenia; but long, heavy, unrefreshing sleep without a satisfactory obliteration of consciousness is quite strongly diagnostic of it.

Signs of disordered gastric and intestinal digestion are common, and probably atony of the organs concerned is very often present, resulting in some degree of ptosis in them. An increased tendency to constipation may be expected. Rarely is there diarrhoea. The urinary solids are almost invariably diminished from an eighth to a quarter, and so is the water; apparently without a corresponding variation in the quantity of food and drink taken or discharged by the bowels or sudoriferous glands.*

Sometimes a vague—rarely a more definite—consciousness amounting to a sense of general pulsation disturbs the patient. The arterial tension, if notably changed, is, as a rule, reduced. Cold extremities, increased palmar and axillary perspiration, disturbance of the general thermal sense, and occasional dermatography are probably all related to a neurotic disorder of circulation.

TREATMENT.

Severe cases occurring in women, whether complicated with hysteria or not, are most successfully treated by a strict application of the rest-cure, which, for many reasons, cannot be detailed here. A few cardinal feat-

* I have frequently demonstrated a decreased renal elimination in these cases, but have never made accurate estimations in the sweat and feces.

ures of it may, however, be mentioned. No success can be hoped for unless the patient freely consent for the time being to become the subject of an absolute despotism; a state something like mental hibernation should be encouraged, except that a prevalent air of cheerfulness and hopefulness must be ever present. Absolute rest in bed, milk diet for a few days until a "milk passage" is obtained, and presumably the alimentary tract is in condition for it, then force feeding with massage and aloes (when needed) to promote metabolism and elimination.

Peculiar natural qualifications, both on the part of physician and nurse, are essential to the efficient and not disagreeable maintenance of necessary obedience and co-operation of the patient. At the commencement the physician should make at least daily visits; and altogether, inasmuch as the treatment has to be maintained about six weeks, it involves considerable expense. This last item has led to conditions which certainly need discussion by the profession. In the first place, it may be said, inasmuch as this method was developed and established by Dr. Weir Mitchell, nearly every one who can afford to pay for its thorough application goes directly to Philadelphia, where he not unnaturally expects to get the best service. The result of this has been the establishment of rest-cures in various parts of the country by nurses more or less well qualified for the work, who undertake to supply what they call the rest-cure at popular prices. Mainly because these proprietors believe, and perhaps rightly, that the added expense would prove fatal to their patronage, while stoutly maintaining that they only take cases by medical prescription and treat them strictly under medical supervision, the patient—and the public, too—in some way soon come to understand through them that the services of a physician are superfluous, and govern themselves accordingly. Thus it often happens that many of their patrons never see a physician during their sojourn in these institutions; and, indeed, many go there solely upon the recommendation of lay friends and acquaintances. It is much easier to perceive the numerous objections to this state of affairs than to suggest an efficient remedy for it. I cannot undertake to discuss this subject further in this place.

Among women even there are marked differences, probably depending upon temperament and early training, in the readiness with which they adapt themselves to the rest-cure. Men can almost never tolerate it in its purity. After all, in practice, only a small minority of cases are treated according to this method. Having in mind what ought to be done, we utilize such sources as are available. After determining the course to be pursued, it is essential that the physician secure and maintain absolutely the confidence and obedience of his patient. Sometimes women may be induced to follow directions faithfully in their own homes with great benefit, either with or without the services of a trained nurse. They should have a written schedule supplied to them, and adhere to it strictly. Much outdoor life should be required in most cases, with regular, gradu-

ated exercise and a generous diet, all interspersed with regular and frequent periods of rest. If a fair amount of outdoor exercise can be taken, massage may often be dispensed with. The patient, in taking outdoor exercise, should never get far from a ready resting place. On this account city parks are excellent, as a good seat is always at hand, so that fatigue may be avoided. Besides, the walks are dry, the air fresh, and there is more or less wholesome diversion always at hand.

The neurasthenic business or professional man may shorten his hours. A great deal may be accomplished from ten to twelve and from two to three o'clock, filling in the interim with judiciously appointed rest, outdoor exercise and diversion. Wheeling and golf have done much for this class of sufferers. Men, as a rule, have enough bodily strength to follow these sports in moderation with comfort. A proper sort of vacation usually affords prompt relief. Life in a rough camp or on an Atlantic liner, providing there is an abundance of suitable food, fresh air, diversion and absence of all sources of anxiety, affords ideal treatment for many cases; but it often happens that the time spent in this way is too short, and a relapse occurs.

The physician who, by prolonged observation and careful study of a neurasthenic, correctly estimates his capacity and limitations, and by dint of patient persuasion, education and eloquence induces him to adopt and adhere to a mode of life consistent with the fullest measure of success comfort and happiness possible to him, earns and sometimes enjoys the grateful appreciation of his patient. He never receives compensation at all commensurate with the value of his services.

THE VALUE OF VENESECTION FOLLOWED BY THE SALINE INJECTION IN ACUTE LOBAR PNEUMONIA.*

BY WILLIAM PORTER, A. M., M. D., of St. Louis.

DURING the past year my confidence in the methods described at the last meeting in the treatment of lobar pneumonia has increased. Not in all cases, but in all where there is obstructed circulation and, therefore, threatened heart failure, I believe that to advise venesection, followed by the saline injection, is the physician's duty.

It is certainly a logical proposition. The blood is changed by the conditions of disease, and the heart-muscle enfeebled by the same cause. Not only the invaded lung, but the whole system is threatened with stasis. Tonics and stimulants are but slowly absorbed from the *prima via*: even hypodermic medication loses its potency, and local applications are valueless. It is interesting to remember that a dozen years ago, Maragliano, before

* Read before the Missouri State Medical Association, 1901: an addition to the paper read before the association last year.

the First Congress of the Italian Society of Internal Medicine, maintained that the local inflammatory process in the lung is due to the presence of micro-organisms, while the general symptoms are the result of the pouring into the blood of the poisonous material eliminated by them. Lucatello found that the injection of sterilized blood serum withdrawn from a patient suffering from pneumonia induced pyrexia, while the injection of blood from the same patient, after recovery, gave rise to no symptom whatever.

If in this condition, or to anticipate such a condition of pathologic blood changed from local infection, some agent or method could be introduced which would remove at least part of the toxin, lessen the stasis, render the blood less coagulable and a better oxygen carrier, and make the work of the heart easier, is it not that which we have been looking for all these years?

Let me hastily sketch the phenomena of lobar pneumonia in the average case, keeping in mind that the tendency is always to a hinderance of the circulatory function from the heart to the most distant capillary. The first true stage is that of invasion, not mentioned in the books as a pathological factor, but one upon which, I believe, all the subsequent processes depend. The patient, it may be, already under the depressing influence of lowered vitality from climatic cause, or other predisposing agent, receives the pneumococcus. The invasion is followed by symptoms due to colonization and multiplication of the specific germ. There are days of depression and malaise. Soon this gives place to the so-called first stage, but which is truly the second. There is ptomain poisoning followed by a chill and succeeding high temperature.

Meanwhile local irritation and congestion is determined at the site of the germ invasion, which has steadily been increasing. The inflammatory processes are more rapid, owing to the greater violence of the cause. We have no expectoration in this and the succeeding stage, as in tuberculosis, but we do find the evidences of the pneumococcus in the blood, which is changed from the normal.

All this is indicated by the increased amount of fibrin and the greater tendency to coagulation. Whether the absence of the sodium chloride is due to physio-chemical changes resulting from the specific poisoning is a question yet to be determined.

While the third stage of pathological change is taking place in the lung the abnormal hemic condition increases. It is during this stage that, as a rule, the greater danger is found. Generally, I have observed that the blood from patients in this period coagulates much more rapidly than in any other, and the quick relief that so often comes to the overburdened heart after venesection is only what has been observed by the pioneers in our work.

But removal of part of the blood is only one step toward complete restoration of the circulation to the normal. To stop here is to miss half and, I believe, more than half the effort to save. There is good reason to

believe that the low arterial tension in the early stages is due to the inhibitory action of the toxin upon the nerve-fibers of the capillary walls and blood vessels. With these changes in the vessels and in the blood, the systemic capacity for aeration is lessened.

As mentioned in my former paper, after the injection of the salt solution the toxins are diluted, delirium relieved, and elimination through the sweat glands and kidneys promoted. Not the least of the important results is that the arterial tension is restored. In most of these cases, owing to vaso-motor inability and the condition of the blood before referred to, the arterial tension is diminished, although the quick and irritable impulse suggests the reverse. It must not be forgotten that the blood pressure may be high even without much arterial tension, because of the stasis.

If the argument attempted in this and the former paper has been followed and accepted, it will be understood why the injection of the saline solution should in almost all cases be preceded by the venesection. Several writers report cases of improvement after the injection, but it is the value of the two combined that I am urgent to assert.

I would not under any circumstances advocate this method to the exclusion of all others. The same general care and medication should be used. Mental and physical quiet, heart support, sponging for fever reduction, the cotton-wool jacket, and, where there is pain from pleuritic complication, the chest compress; all these and many other things are to be utilized. It is not a substitute for old and approved methods that I advocate, but an addition. I believe that the whole treatment of lobar pneumonia may be summed up in a brief formula: conserve the strength, guard the heart, and diminish the toxins. While as yet we have no antidote for true pneumonia, yet it is essentially a self-limiting disease, and this element should not be lost sight of. In its care we do not so much aim for immediate as final result. I believe, also, that the mortality is greater than it should be, and that the routine and reckless use of heart depressants in the early stages is responsible for disaster in the later stages. The indication in high temperature and rapid pulse is not to depress the heart but to sustain it while removing, as far as possible, the cause.

The multiplication of case histories would not add weight to the argument. The procedure is growing in favor and will surely become established. I will cite a single case which can justly be regarded as typical.

A salesman, aged forty-six, good physique, was seen on the fourth day after a severe chill. He had been drinking hard and was delirious. Skin dry, temperature $103\frac{1}{2}^{\circ}$, pulse 126, and no chlorides in the urine. Heart-sounds weak and incomplete. Respiration 40. There was complete dullness and absence of vesicular murmur over the whole of the right lower lobe and a large part of the left. All of the usual evidences of double lobular pneumonia were present. The usual treatment of heart tonics and stimulation had been used without response.

He was at once bled to the extent of twenty ounces, the blood being

very dark and coagulating immediately. Twenty-two ounces of normal salt solution were slowly injected with a noticeable reduction of the urgent symptoms. Six hours after the temperature had fallen to 102°; pulse, 118, and respiration 32, with much less delirium. Chloride of sodium was found in the urine, and the surface of the body became moist. With but little medication the patient made a complete recovery. This was the worst case of lobar pneumonia that I ever saw get well.

It is possible that I may have used venesection with the saline injection in cases in which recovery would have resulted without it, but in the above case no such hypothesis could be entertained. Besides, I have never seen harm from it, but am sure that favorable resolution has been hastened in many instances.

I cannot close without again calling attention to the importance of a differentiation between the specific lobar and the simple lobular or broncho-pneumonia. While the method of treatment described has been of use in the latter form, because of the relief to the overburdened circulation, the most signal results have followed its employment in the form where not only there has been the diminished circulatory disturbance, but a lessening of the specific cause.

3886 Washington Boulevard.

A GENERAL CONSIDERATION OF PULMONARY TUBERCULOSIS, WITH PLEA FOR ITS TREATMENT AT SPECIALLY FITTED INSTITUTIONS.

BY ROBERT M. ROSS, M. D., of St. Louis,

Physician to the Convent of the Good Shepherd; Assistant Physician to Mount St. Rose Sanitarium; Bacteriologist to Alexian Brothers' Hospital.

DURING the past few years much discussion has been indulged in and many volumes have been written about "The Great White Plague"—the scourge of "consumption"—but in view of well-founded estimates that, at the present rate, one-seventh of the whole population of the United States will die of this fearful malady, the widespread consideration it is receiving is not only justifiable, but is demanded. The more advanced thinkers and investigators agree that pulmonary tuberculosis is a preventable and a curable disease. I believe that it may be prevented from attacking an individual who, ordinarily, would certainly fall a victim; and that in many cases an absolute and positive cure may be effected, and that its ravages, even in a well-developed case, may be stayed and life indefinitely prolonged.

Prevention of this disease in those who are likely to contract it requires intelligent, well-directed and long-continued effort at prophylaxis;

and I regret to say that this method of limiting its spread does not, at this time, offer a great deal of hope, because of the deep-rooted tendency in the average American to delay the treatment of a disease until it actually manifests itself; to give his physical condition but little thought until he is actually "sick." We find a proneness or predisposition towards tuberculosis, just as we do towards other diseases, but it sometimes requires skill and sound judgment to detect this; and often it is by no means easy to impress a man with its importance sufficiently to secure his hearty and continued co-operation in carrying out prophylactic measures.

In a consideration of pulmonary tuberculosis as an entity, the question of diagnosis is the most important one, and should receive the physician's first and most careful attention. Now, some one may say, "That's a peculiar statement; there should be no difficulty about making a diagnosis; why, *anybody* can tell when a man has 'consumption.' " I answer yes, perhaps almost any one can, at a certain stage, but when that stage has been reached it is often a matter of little consequence whether a diagnosis is ever made, so far as the final result is concerned. To make a positive diagnosis of tuberculosis when only a small portion of lung tissue is involved, when there is yet no noticeable depreciation of the general condition, when the digestive organs are but slightly affected, and when there is but little cough and perhaps no febrile disturbance, is by no means always easy, and it requires an accurate knowledge of the anatomy of the chest and of the structure and physiology of the thoracic organs.

In all diseases diagnosis is of first importance, since the physician cannot, intelligently, treat a case until he knows what he is treating; but in self-limited diseases an early diagnosis is not always urgent, so far as ultimate results are concerned. Tuberculosis, however, is not a self-limited disease, and for that reason a very early diagnosis is of the gravest importance.

The earlier the diagnosis is made and proper treatment instituted, the greater will be the patient's chances of recovery. I hold that the physician who is not able to diagnose pulmonary tuberculosis in its incipient stages is not a thoroughly competent practitioner. However, many unhappy results have been charged to the incompetence or dereliction of the medical profession that should properly have been charged to the patients themselves or to their friends. Almost any one can recall a case like this: A young woman, previously strong, begins to feel indisposed and to slowly lose flesh, and develops a dry, hacking cough, which she passes by as a mere "cold." The cough continues and some friend, who "once had a cough just like it," recommends some "cough syrup." The cough is stopped, for the "cough syrup" contains opium, but the morbid processes go right on, and the ravages of the disease progressively increase as the patient, slowly growing weaker, confines herself more and more to the house, and closes one air-hole after another out of fear of "drafts." When the physician is consulted, the patient presents a well-developed case of

"consumption," and her chances of recovery have become almost *nil*.

If such a case were diagnosed early and treated properly, through the co-operation of the patient much hope might be extended. Unfortunately, the average case of pulmonary tuberculosis is not unlike the picture here presented—at least the disease is so manifest that the veriest tyro may recognize it—when it comes under the care of the physician, so that the question of prophylaxis is removed from his consideration, and he is brought face to face with a condition which is sapping the most vital parts of the economy, and which, if left alone, will, in nearly every case, progressively increase its ravages until the patient succumbs.

What, then, shall be said as to treatment? There is perhaps no disease for which a greater variety of medicinal therapeutic agents has been suggested and tried. As positive curative means they have all failed; so we have come to look to other remedial agents, and experience has shown that we have not looked in vain.

Having known numerous instances where the individual enjoyed perfect health until an attack of pneumonia, influenza or pleurisy caused a depreciation of his powers of resistance, after which he fell a victim to pulmonary tuberculosis, and having seen his vital forces gradually ebb away until he became exhausted and gave up the struggle, I have come to believe that the question of treatment of the condition is mainly one of nutrition—a staying of the gradual depression of the life forces and securing their return to a normal standard. The term nutrition is here used in its broadest signification, meaning all the activities, taken collectively, which are concerned in supplying the cells of the various tissues of the body with food, in bringing about certain changes in the food and building it up into cell-substance, in liberating from it proper energy, and in ridding the body of the waste material resulting from these processes. In short, the term, as I here employ it, comprises the functions of respiration, circulation, digestion, absorption, metabolism, and excretion.

The man in whom there has been no lapse nor aberration of any of these functions will not contract pulmonary tuberculosis; or, given a man who has already contracted it, his chances of recovery are in direct proportion to the possibility of bringing them back to the normal standard and securing their harmonious and unified action. If a single one of them fail him he is at once in jeopardy, since they are all interdependent.

As to the relative importance of these functions it is hard to determine, but, in the general run of cases, I believe those of respiration and digestion are most important and should receive the physician's closest attention. If these two functions can be restored to approximately normal conditions, the natural tendency is toward a restoration of the others.

In what way, then, may the well-being of these functions be best conserved? A practical answer involves some underlying principles, which have often been observed, but which are daily disregarded, viz.: the greater the departure from nature and from natural principles, the greater

the liability to physical defect and to physical disease; the simpler and more natural are a man's habits of life, the less likely is he to contract disease, of whatever kind, but especially that class to which belongs pulmonary tuberculosis. A man is certainly not in accord with nature's laws when he shuts himself up in a house with numerous fellow-beings away from the sunshine, and day after day and month after month breathes vitiated and polluted air; nor is the man who sits humped over a desk year in and year out, rarely giving his lungs a chance to expand and fill themselves with pure air from which the blood may extract the oxygen necessary to his vital functions. It is, therefore, not surprising that it is mainly from these and similar classes that the "Great White Plague" gets its victims. On the other hand, it is among the country dwellers, those who are in closest touch with nature, who spend much of their time in the sunshine, breathing the purest air obtainable, that we find the disease least prevalent. And among those who spend practically all their time out-of-doors, in a not too rigorous climate, even sleeping with no covering save blankets and the broad canopy of heaven, pulmonary tuberculosis is a comparatively rare disease.

In the treatment of a disease, it certainly appears rational to begin by placing the patient under those conditions in which it is found the disease is least likely to develop. This, I believe, is the key to the successful treatment of pulmonary tuberculosis. In short, I am an advocate of the so-called "outdoor treatment."

Where and how may the best results be obtained? Much has been written commending this or that place as best for the treatment of this disease, and there is no doubt that portions of Colorado, the foot-hills of the Rockies, the dry sunshiny regions of Arizona, New Mexico and Texas, and the pine slopes of the Florida peninsula possess climatic advantages that are valuable and well suited to certain cases, but many disappointments have been experienced in these places. Just as is the case with patient medicines, the general public hears of the cases that are successfully treated in these resorts but does not hear of the great number of failures. Many tuberculous patients go to these resorts when the disease has so far advanced as to preclude any reasonable hope for relief. Such should certainly never be advised to go, and if possible should be prevented from going. Some failures are doubtless due to the fact that patients go into improper altitudes, and many more to the want of comforts and the sympathy of friends, with the consequent gnawing heartache of nostalgia.

Then, too, some of our most famous resorts are becoming more or less infected with the tubercle bacillus, simply because the large number of sufferers who go there are not placed under any system of sanitary rules or regulations. They come and go at will, expectorate wherever they may please, thus scattering broadcast billions of these micro-organisms. This feature has become so serious that in places the local authorities have considered plans to control the influx of tuberculous people. Such local sani-

tary conditions are certainly not inspiring to the man who goes to rid himself of this micro-organism and its effects. Another bar to the climatic treatment is that we often find the patient so situated, financially, or otherwise, that he cannot go to some distant part of the country and remain indefinitely.

Much has been said of late in advocacy of the outdoor home treatment of pulmonary tuberculosis—having the patient spend all of his time in open rooms, even sleeping out-of-doors, in some sheltered place. This plan has certain advantages, but in the majority of cases proper measures cannot be carried out at the patient's home (at least they are not), and his diet and habits cannot be properly regulated. The most vital objection is that good air cannot as a rule be obtained, since a majority of consumptives in the large cities live in thickly populated districts, where the air is not only vitiated, but is polluted with smoke, dust and other impurities.

Since most of these unfortunates cannot go away, and since in many instances it is inadvisable to send them, they must be treated in their own climates—whatever may be said against those climates, much of which, however, I believe to be more fanciful than real.

How, then, shall this be done with the greatest degree of success? Happily, in every State, even in the suburbs of our great cities, there may be obtained comparatively pure air, a goodly percentage of sunshiny days, coupled with scientific regulation of diet, habits and sanitation, and the pleasures of home comforts and the society of friends. These requisites are being obtained and successfully employed in hospitals and sanatoria erected in various places for the treatment of consumptives, and I believe these institutions offer the greatest hope to the majority of this class. Each of our great cities should have within easy reach one or more such places, thus affording to many of its citizens opportunities which they are unable to go away in search of.

There are a number of institutions of this kind in the United States, most of them, however, under private control. Those under private supervision, with but few exceptions, attempt to make themselves self-supporting, and, from the very nature of the case, cannot look after the welfare of the vast number of consumptives that come from our indigent classes, although some institutions are doing much charity work. Great numbers of these annually drift into the general public hospitals, where they not only become a menace to others, but where few of them are ever benefited, since the average city hospital is neither properly situated nor properly constructed for the most successful treatment of pulmonary tuberculosis. States and municipalities should provide institutions for the proper care of this large class of their unfortunate, poor. Many of them become public charges anyway, and it would certainly be better to care for them in such a way as would restore some of them to health and make them self-supporting, besides placing them where they are not constantly endangering the lives and health of others.

Suitable public institutions, placed in charge of skilled attendants, would do the community a service of incalculable value in limiting the spread of this dread disease and restoring to health many of its useful members.

Under the newer methods of treatment the medical profession has, almost unaided, achieved some excellent results, as shown by the decreased mortality; but before we can make any great progress toward freeing our country of the blighting influences of tuberculosis, the public authorities, national, State and city, must possess a more accurate knowledge of the disease and have their minds relieved of the idea, now too long and too generally prevalent, that it is incurable. Every State should have its anti-tuberculosis society, affiliated with a national organization, and these societies should admit to membership not only physicians, but representative laymen from all the walks of life, to the end that there may be a general dissemination of knowledge concerning this scourge of the human race.

3861 Russell avenue.

INSULATION COMPLICATED BY LOBAR PNEUMONIA.

BY FLOYD STEWART, M. D., of St. Louis, Missouri,

Late Major and Surgeon, Second U. S. V. Infantry; Physician to the Clinic for Diseases of the Skin, O'Fallon Dispensary, Medical Department Washington University; Formerly Assistant to the Chair of Dermatology, New Orleans Polyclinic.

THE patient, A. W. S., aged twenty-eight years, splendid physique, does not drink, and had been in good health up to a few weeks previous to this attack. At that time he contracted a cold which would not yield to home remedies. He presented himself at my office on June 28th, and I found a well-developed case of bronchitis. I prescribed and told him to return on Monday, July 1st. He did so—reported that he was feeling much better, but stated he had spent the previous day on the river in a small naphtha launch, going in swimming, etc. As he complained of feeling tired I ordered him to go home and avoid the sun. He did so, but only remained there a few hours when he visited one of the summer gardens.

About 12:30 A. M., July 2d, I was called; found him with a rapid, bounding pulse, face and body flushed, temperature $106\ 4.5^{\circ}$, rapid respiration; complained of headache, backache, and dizziness.

Immediately applied an ice-bag to the back of the head, ice-cloths to his forehead and began sponging him off with ice-water, also rubbing ice on him. An enema was given which produced a copious action; his temperature fell to 103° , pulse fast but of good character. I allowed him to rest a few minutes with ice-cloths and ice-bag to his head. In a few min-

utes temperature rose to $104\ 2.5^{\circ}$. An ice sponge bath was again given together with five grains of antipyrin. The temperature fell to $102\ 1.5^{\circ}$, pulse still 100, but good volume.

In fifteen minutes the temperature went up to $103\ 4.5^{\circ}$. Again the sponge bath was used together with an ice-water enema and antipyrin. Within twenty minutes temperature $101\ 2.5^{\circ}$. After an hour it was $102\ 1.5^{\circ}$. So I left after leaving instructions what to do. I returned within a few hours and found the temperature 100° , pulse 95.

I prescribed a laxative and a mixture containing *nux vomica*, sweet spirits of niter and solution of citrate of potash.

At 11 A. M. I was informed that the temperature had jumped up to 105° ; but following my directions they had reduced it to 104° , then $102\ 2.5^{\circ}$, and that was the temperature on my second visit, but he complained that coughing gave him a severe pain in the right side; expectoration was free, yellowish in color, the cheeks were still flushed. On examining his chest found large and small moist rales. That evening at 6 P. M. I again called; found him expectorating freely, but a rusty color to the sputum. Respiration 40, temperature $103\ 2.5^{\circ}$, pulse 100. Ordered the mixture stopped and prescribed strychnine sulphate in 1-60 grain tablets, to be given every three hours; milk and Vichy every two hours. Pain being so severe, gave him five grains Dover's powder to induce sleep and relieve pain—only one being given, as the pain was relieved and sleep followed, which was prolonged for a number of hours.

July 3d temperature $104\ 1.5^{\circ}$ in the morning, right cheek redder than left, intense pain in right side, referred to the right nipple and axilla, sputum more blood than yesterday.

Some dullness over right lower lobe. Respiration 45, pulse 100, good. Continued the sponge baths, strychnine and liquid food. Gave morphine, one-eighth grain, hypodermically, for pain; also citrate of lithia, five grains four times daily in Vichy. Temperature fell a little by noon, but in the evening it was up again to 105° ; no change in sputum or pulse.

Dullness perceptible over right lower lobe, lessened movement on that side, respiration hurried and shallow; bronchial respiration could be plainly heard.

July 4th passed a fairly good night, temperature 104° , respiration 40, pulse 100. Evening, temperature $103\ 2.5^{\circ}$, pulse 100, respiration 32. Milk punches were ordered.

July 5th temperature $103\ 3.5^{\circ}$, pulse 104, respiration 32; slept fairly well; urine was passed in large quantities, bowels moving freely.

At 4 P. M. temperature $104\ 2.5^{\circ}$; at 6 P. M. temperature $103\ 4.5^{\circ}$, pulse 100, respiration 36; sputum very tenacious.

At 2 A. M. July 6th severe chill, temperature fell to 99° , pulse fast and weak, 120, respiration rapid and shallow; hard to arouse patient. Strychnine, aromatic spirits of ammonia and whisky were used rapidly and repeated at short intervals.

At 2:45 A. M. temperature 100° , pulse 110, weak and easily compressible, respiration 36.

At 4 A. M. temperature 104° , pulse 104, still weak, respiration 38. Stimulants were used and repeated when necessary.

At 8 A. M. July 6th temperature $102\ 3\text{-}5^{\circ}$, pulse 100, respiration 32. All day temperature was bounding up and down— 104° at noon and 102° at 6 A. M., pulse 96, respiration 32.

At 8 A. M. July 7th temperature $98\ 4\text{-}5^{\circ}$, pulse 84, respiration 36. At noon temperature $99\ 4\text{-}5^{\circ}$, pulse 68. At 6 P. M. temperature 100° , pulse 72, respiration 31.

July 8th, 6 A. M., temperature $97\ 1\text{-}5^{\circ}$, pulse 62, respiration 32. Repeated stimulation failed to raise the pulse, though of fairly good volume.

Stimulants were used freely; between 2 A. M. and 9 A. M. about 1-5 grain of strychnine, four ounces of whisky and two drachms of aromatic ammonia were used; pulse weak and varied from 62 to 68, temperature 97° to $98\ 1\text{-}5^{\circ}$.

At 9:15 pulse 72, temperature $97\ 1\text{-}5^{\circ}$. Hot applications were applied.

Stimulation and heat continued. At noon temperature $97\ 2\text{-}5^{\circ}$, pulse 74, respiration 26. At 6 P. M. temperature $99\ 3\text{-}5^{\circ}$, pulse 74, respiration 24; pulse now of good character and remained good for some time, even when stimulants were stopped until 5:45 A. M. July 9th, temperature fell to $97\ 3\text{-}5^{\circ}$, pulse 64. Profuse perspiration which was controlled by atropia hypodermically in 1-100 grain doses.

Had hot salt sponge baths given, the salt being thoroughly rubbed in, also salt in enemas, but pulse grew weaker and slower; from 62 it went to 60, then to 58 in spite of stimulation.

July 10th pulse showed some improvement in early hours, but fell later in the day to 56, then 54, then 52, then to 48.

July 11th pulse varied 60 to 70, temperature 98° . Nourishment was given every two hours, which consisted of egg-nog, milk, broths, and soft boiled eggs.

July 12th pulse varied 60 to 72 but was of good character; temperature varied from 97° to $98\ 4\text{-}5^{\circ}$, sleeping well. At 5 P. M. pulse 72, of splendid volume, and temperature $98\ 3\text{-}5^{\circ}$, respiration 20. A tonic containing iron, quinine, arsenic and caffeine was prescribed.

July 13th temperature normal, pulse 68. Nourishment was given and he was allowed to get up, which seemed to improve him. The sputum lost the rusty color entirely on July 12th and was now a grayish-white, but not profuse. He continued to improve; though the pulse varied it was of a splendid character. He was allowed to get up and move around carefully.

After July 14th he made an uneventful recovery.

The consolidation in his lung began disappearing on July 7th and the entire lung cleared up rapidly.

I wish to call attention to the course of this case. It is interesting to

note that the crisis came on the third day, which, though, is not unusual. Still, only a few cases have been reported, the crisis usually being deferred until the fifth to the ninth day.

I consider that the reason for the early crisis was due to the great heat that the body was subjected to before the complication was noticeable; that instead of being detrimental, the high fever was beneficial, as it produced a condition within the body whereby the antitoxic properties were more readily developed, thereby forming an antitoxin in a shorter space of time than it usually takes.

Osler states: "Fever is not, I think, hurtful; it is not impossible, as some suppose, that fever may be directly beneficial."

Also, to the secondary rise in temperature, the subsequent fall of same, in which it was such a difficult task to keep it up to the normal.

The same can be said of the pulse, which never went up very high, as is usual in croupous pneumonia; and though it was below the usual, repeated stimulation failed to bring it back. The respiration never exceeded 45, which, though not unusual, is rare.

Little medicine was given—none directed toward the pneumonia. Strychnine was the bulwark on which all reliance was put.

Carefully regulated diet and strict attention to the secretions of the body, with careful nursing, brought about a favorable termination.

I take this occasion to again express my thanks to the nurses who were associated with me. This is another case in which herpes labialis appeared and a favorable termination resulted. The significance of this sign to the disease is unknown, but many suppose it to be of a favorable prognosis, and figures have been quoted in proof of this assertion.

REPORT OF A CASE OF LEPROSY.

BY MARTIN F. ENGMAN, M. D., of St. Louis,

Chief of the Dermatologic Clinic, Polyclinic, Medical Department of Washington University,

And A. FALLER, M. D., of St. Louis,

WE REPORT this case of leprosy on account of the rarity of the disease in this section of the country, and because we feel that such isolated cases should be brought to the attention of the profession.

On the 7th of last August Ding Dong, a Chinese laundryman, aged thirty-four years, came to the Polyclinic of the medical department of Washington University, suffering with a "skin disease," and was referred to the dermatological department. He claims to have come directly to St. Louis from China ten years ago, and has resided in this city ever since.

The history of the patient was hard to obtain, owing to the proverbial reticence of the Chinese, and that the patient himself spoke practically no English. The interpreter, a countryman who accompanied him, could not or would not enter into his past history.

The patient seemed to be in good general health. Examination of internal organs elicited no evidence of disease. The present eruption, he says, has existed only during the past five months. Syphilitic history

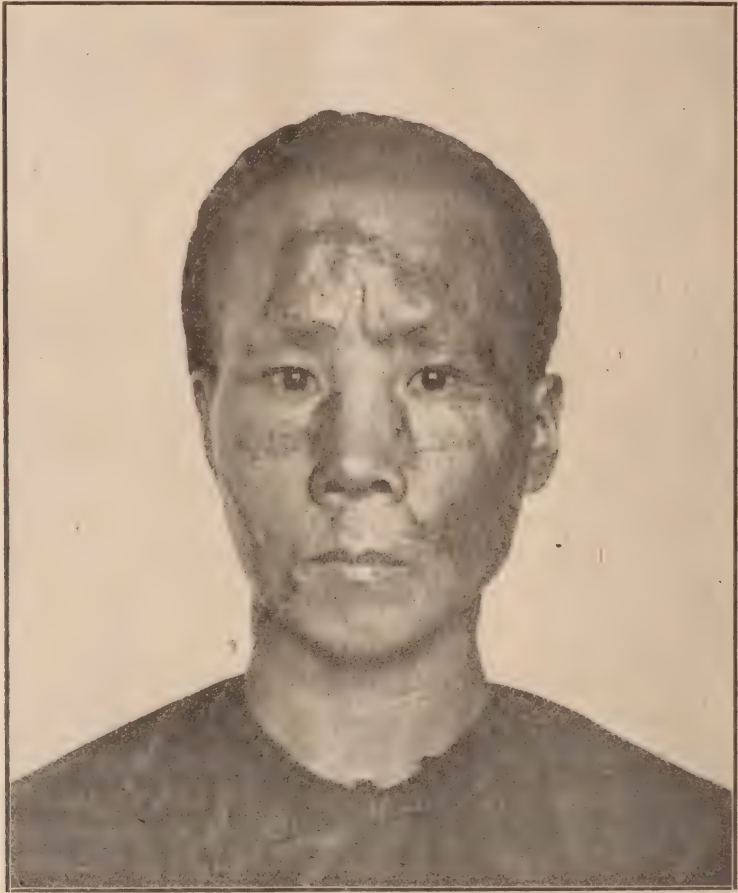


FIG. 1.

was strenuously denied, as was also all knowledge of any previous eruption or indisposition of any description.

Upon the forehead of the patient there is a large, sharply-defined patch with irregular, serpiginous outlines, the border indurated and slightly raised above the surface. The color over the whole patch is deepened. The ears, except the margins, are slightly infiltrated, but not erythematous. Both cheeks are partially covered with a similar lesion to that upon the forehead, but not so greatly infiltrated. The left eye and both sides of the nose are likewise involved, with markedly indurated

borders. The ridge of the nose has so far escaped. The upper lip is partly covered by a raised infiltrated patch. A crescentic scar appears upon the left temple; this is white and sunken. Similar scars appear scattered over the body, probably the remains of former pemphagoid (leprous) eruptions. At the angles of the lower jaw are prominent characteristic plaques. The back and chest are covered by acne papules, but present no lepra lesions. Near the inferior angle of the left scapula is a small lipoma. From the middle of the crest of the ilium on the left side, extending to the vertebral column, occur a multitude of scars, probably the remains of the former bullous leprides. Upon the arms are a great number of round, sunken, pigmented spots about the size of a split pea, and also on the thighs are several round glistening scars.

A large, irregularly-shaped, maculo-serpiginous lepride appears upon both forearms, upper arms and upon ankle and knee of left side. These lesions, as well as those upon the face, are all anesthetic, varying in degree from diminished sensibility to complete anesthesia. There is no marked glandular enlargement. The ulnar nerves are appreciably thickened and slightly roughened, but not painful to pressure. The fingernails as yet are not involved. There is a mutilation of right thumb, probably from accident. The pharynx is greatly congested, also the mucous membrane of the nares.

The diagnosis of macular anesthetic leprosy was made. A piece of cotton on a probe was inserted into the nose and then wiped over several slides; these were stained, after fixing with heat and washing with ether, with carbol-fuchsin and Gabbett's methylene blue solutions. After careful search, two lepra bacilli were found.

A piece of skin removed from the border of the patch on the left arm was fixed in formaline, run through alcohol, mounted in celloidin and cut, the sections showing by the carbol-fuchsin-methylene blue method myriads of lepra bacilli, thus confirming the clinical diagnosis (See Fig. 2.) As soon as our diagnosis was made the health authorities were notified and the patient at once turned over to them.

Leprosy is a disease of which we all have an hereditary dread; as it figures so prominently in ancient and biblical literature, we hear of it in our early years and are familiar with its terrible mutilations. It is a comparatively rare disease in our country, but in certain sections it is quite prevalent, especially in Louisiana and Minnesota, in the latter country having been migrated from Norway and Sweden. Now and then isolated cases are reported from various sections, the source of some of these isolated cases being very obscure. The principal interest to all of us is the etiology of the disease.

Since the discovery of the specific bacillus by Hansen in 1879, and shortly afterwards confirmed by Neisser, we know that it is a specific disease produced by a special organism. On account of the great similarity between this bacillus and the tubercle bacillus, it was formerly thought

that they were the same; and this idea was furthermore strengthened by the great number of leprous individuals who died of tuberculosis of the lungs and other organs. But after thorough study with improved methods we know that there is no relation at all between the two bacilli or diseases, only that of secondary infection of leprous individuals by the tubercle bacillus. A large number of such individuals do not die of their leprosy, but various intercurrent diseases, the most prominent being tuberculosis.

The life-history of the lepra bacillus is not known; only in the last few years have successful methods for artificial cultivation been obtained.

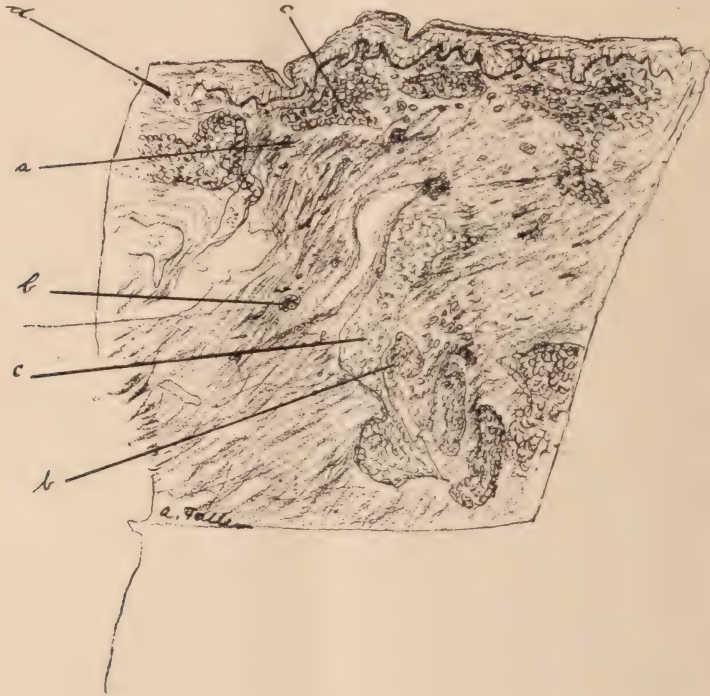


FIG. 2.

Cross-section of skin, stained with Van Gieson-Ernst and Ziehl-Nielson (Leitz, ocular 3, objectives 6 and 12, oil immersion), lepra bacilli showing black, while with above stains they are red, resembling tubercle bacilli.

a Extra-cellular lepra bacilli.
c Infiltration of round cells.

b Giant cells containing bacilli.
d Rete Malpighii showing excessive pigmentation.

That the disease can be conveyed directly from individual to individual is probably true. Yet it is no doubt the fact here, as in all diseases due to a special organism, that certain unknown factors or predisposition is necessary for its successful infection.

The hereditary theory has been disproved, as in tuberculosis. Some years ago Dr. Hansen visited the lepers of Minnesota, all of them having been imported from Norway and Sweden, and of leprous families. He found no new cases or any evidence of heredity. Lately Dr. Foster has reported a new case from Minnesota in a boy of twenty years, which is un-

doubtedly one of infection and not of heredity. Dr. Montgomery, of San Francisco, who has had a long and varied experience with leprosy, reports several cases probably infected in California, but all of these cases had been subject to prolonged and intimate exposure to the disease.

Dr. Profeta some years ago subjected himself and some students to actual inoculation with leprosy tissue or discharge from leprosy sores, without conveying the disease.

In searching the literature carefully, nowhere can a well-authenticated case of direct inoculation be found. In most all of them evidence of prolonged contact is usually the case. But the profession must admit its ignorance upon this fact, for no one can positively state the life-history of this bacillus or its manner or mode of entrance into the human body. Hutchison's theory, that fish were the intermediate hosts, has been exploded. The Japanese think that flies and vermin play an important part (Ashmead).

A few years ago it was brought forward that infection in a great majority of cases occurred through the nares, either by the bacilli gaining entrance with the inspired air or by being deposited there by infected fingers. It is true, in most cases, bacilli can be found in the nasal secretion, or the membranes present some congestion and symptoms there. This being a fact, and if the disease is infectious, the mouth and nasal cavities and secretions are decidedly dangerous, especially so when the disease occurs in an individual with the occupation of our patient. Chinese laundrymen sprinkle their laundered articles with water ejected from their mouths, thus probably throwing upon the clothing (handkerchiefs, napkins, etc.) thousands of bacilli, if they are leprosy. If these organisms are infectious, then this is dangerous.

It is very probable that in the next few years leprosy will not be such a rare disease, unless the government takes steps in the segregation and detection of these unfortunates. Since we are now in closer contact with leprosy islands (Sandwich Islands, Cuba, Porto Rico, and the Philippines) the need of governmental inspection and segregation is imminent, not only for the protection of the non-leprosy, but the leprosy themselves. To provide a suitable home for them, where they will be properly cared for and not shut off by themselves in a hut or under lock and key in a prison-room as a criminal before the law, as has occurred several times in this country where isolated cases have been discovered. Think of the inhumanity and horror of such a position! This is probably the future of our case—solitary confinement for life, with only an attendant to share his loneliness. No hope! The Bastille in all its horror!

Of course the community must be protected, but let the government show mercy in providing a proper home.

MEDICAL AND SURGICAL PROGRESS.

SURGERY.

Multiple Hemorrhages of the Face and Conjunctivæ.—Hoppe (*Centralblatt fuer Chirurgie*, July 27th) says that a sudden pressure on the thorax has been known to induce hemorrhages in the face and conjunctivæ. The phenomenon was consecutive to trauma in the nine cases on record, but Hoppe observed a case in which it followed violent itching. The patient, a man of thirty-five, had eaten mushrooms, and, fearing that they were poisonous, tried to vomit them by tickling his throat and retching. All the cases were distinguished by the swollen cyanotic aspect of the face and the numerous hemorrhages, mostly petechial, with transient disturbance of sight.

The Treatment of Complicated Fractures.—Franke (*Archiv fuer klinische Chirurgie*, Vol. 62, No. 4) divides his researches in the treatment of complicated fractures into two parts: those of the extremities and those of the skull. Modern aseptic treatment has made these wounds much less dangerous than they formerly were. In every case he tried to keep the wound aseptic, to put the fragments into good position, to keep up absolute rest, followed after healing by regulated movements. The region of the wound was disinfected, and if the wound was small and contained a foreign body, it was removed; the wound dried out with sterile gauze and a sterile dressing applied. In large wounds counter-incisions, drainage, removal of splinters of bone, etc., followed, but washing out with antiseptics was never done. Large pieces of bone were saved, sharp edges being sawed off first to prevent pressure on the blood vessels and gangrene. When dislocation seemed imminent, bones were sutured together with silver wire. Attempts were made to cover the bone with soft parts. The injection of iodoform and drying with sterile gauze completed the treatment. Immobilization was secured with plaster bandages. Osteoplastic resection was necessary in some cases.

Mechanical Appliances in Gastro-Entero-Anastomosis.—Kelling (*Archiv fuer Chirurgie*, Vol. 62, No. 4) speaks of the prejudices against the use of the Murphy button in gastro-entero-anastomosis. Yet he considers that a good anastomosis button will resemble the Murphy button, for it must remain unchanged until the necrotic intestinal wall has been thrown off and then wholly digested in the stomach or intestines. Kelling has constructed a button from ivory that has been deprived of its calcium. It is in one piece, a cylinder with funnel-shaped ends, covered with rubber, as a protection against the digestive juices. This covering is absent in the

deep outside groove where the stitches will be placed. It is fixed in place by two sutures. A number of experiments with animals are detailed to show its usefulness. For operations on the colon, Kelling has devised a wooden button which he has used in dogs. Kelling has also employed absorbable plates of bone or ivory from which the calcium has been removed.

Colon Tuberculosis.—Hugel (*Archiv fuer Chirurgie*, Vol. 62, No. 4) reports three cases of colon tuberculosis in which operation was necessary. In the first the mass was in the ileocecal region; in the second, in the ileocecal region, ascending and transverse colon; in the third, in the right colic flexure. Resection of the affected part of the intestine with anastomosis was performed. Two of the patients recovered, while the other died. Microscopic examination confirmed the diagnosis of all three cases. Hugel believes that the whole of the affected part should be removed. Should phthisis also exist, he believes that all of the intestines should be stripped and the exposed ends of the intestines opened. By ligating the mesenteric vessels leading to the exposed portion of the intestine, certain involution of the tubercular process will follow and perhaps later save resection.

GYNECOLOGY AND OBSTETRICS.

Edited by HUGO EHRENFEST, M. D., Consulting Gynecologist, St. Louis City Hospital.

Gonorrheal Peritonitis in Little Girls.—J. Comby and Gadaud observed three cases of this condition. The symptoms were those of general peritonitis supposed to be due to the rupture of an appendicular abscess. The little patients were prepared for operation; in each case evidence of an acute gonorrheal vulvaginitis was then discovered. The possibility of a gonorrheal origin of the peritonitis was assumed, and a conservative treatment decided upon. All three cases made a rapid and perfect recovery under this treatment. In conclusion, Comby and Gadaud emphasize the necessity of a careful examination of the genitalia in cases of peritonitis in little girls, and warn against a too ready diagnosis of "appendicitis."—*Bulletin de la Soc. Med. des Hopiteaux*, Paris, May 30, 1901.

"The Influence of Pregnancy and Confinement on Phthisis Pulmonum and the Therapeutic Value of Artificial Abortion" is the title of a paper read by Kaminer at a meeting of the "Society for Internal Medicine" in Berlin (June 3, 1901). In his deductions the author says that, while gynecologists are always very conservative concerning the question of artificial abortion, internists hold a different view. Leyden, for instance, has advised abortion in all severe cases of heart and lung troubles. Maragli-

ano considers interruption of the pregnancy necessary in every case of tuberculosis. To bring light on this difficult problem, Kaminer made researches among the patients of the Royal Policlinic in regard to the influence of pregnancy and labor upon tuberculous women. He found that out of twenty-three confinements, fourteen ended fatally. In two cases the confinements were followed by the development of tubercular foci in other parts of the body. He does not agree with Maragliano's extreme radical issue, but thinks, however, artificial abortion is indicated in many cases. As abortion always involves considerable danger, cases of rapidly progressive phthisis may be excluded from this procedure. In *multiparæ* the history of previous labors ought to be taken into consideration. Artificial abortion should be given preference to premature induction of labor. The former operation has been performed in eighteen of his cases, without any immediate unfavorable influence on the patients. One patient died eight, another fourteen months after operation, five later became worse, eleven patients were afterwards enabled to do their work.

In the discussion following this paper Jacob said that he agrees with Kaminer's views about the unfavorable influence of pregnancy on tuberculosis, but he did not get the same satisfactory results from artificial abortion. He thinks more good can be done by preventing tuberculous patients from marrying.

Strassmann emphasizes the fact that while induction of premature birth is a dangerous procedure, artificial abortion is far less hazardous. He considers prevention of conception the best resource. Operative procedures (as excision of the tubes, etc.) advised for this purpose have to be rejected because they involve in tubercular patients a greater risk than abortion. —*Centralbl. fuer innere Mediz.*, June 29, 1901.

Changes and Diseases of the Eye During Pregnancy, the Puerperium and Lactation.—Sandmann prefaces his paper with a consideration of the connection between some general diseases and diseases of the different organs of sense. The relations to diseases of the eye are best known. He limits himself to a discussion of eye diseases etiologically connected with pregnancy, the puerperium and lactation.

1. *Retinitis albuminurica gravidarum* is nearly always caused by the kidney of pregnancy. Visual disturbance is often the first symptom of the general disease. The prognosis of this condition is largely dependent upon the condition of the retinal vessels. Without proper treatment the outcome is unfavorable. The best mode of dealing with this condition is as follows: If the retinitis appears in the later stage of pregnancy and an ophthalmoscopic examination shows only slight alterations in the retina and no changes in the vessels, the end of pregnancy may be awaited. In the meantime the treatment of the nephritis is carried out, and ophthalmoscopic examinations repeatedly made. If the retinitis occurs in an early stage of pregnancy and if there are marked alterations in the retina,

especially in its blood vessels, abortion or premature birth is to be induced immediately. Subsequent pregnancies should be avoided, even by operative means. As a consequence of the tendency to the formation of edema during pregnancy, a detachment of the retina is a frequent complication. Under proper treatment the prognosis of *retinitis albuminurica gravidarum* is favorable.

2. *Ante, intra and post-partum transitory uremic amaurosis* has been observed. The etiology of this condition is not yet clear, but it appears that toxins, which produce alterations in the kidneys, heart, brain and eyes, are responsible.

3. *Retinitis septica* (Roth) is looked upon by many authorities as a rare variety of *metastatic panophthalmitis*, which is relatively frequent in puerperal sepsis. The prognosis of the latter is very dubious, in view of the critical general disease. Sandmann, however, found two instances of puerperæ suffering from bilateral panophthalmitis, who made a perfect recovery.

4. Finally, the author mentions *neuritis optica* sometimes occurring during lactation. According to Uhthoff's researches, this condition is due to toxins.

Degeneration of the optic nerve may be caused by exhausting hemorrhages. The prognosis of the latter condition is unfavorable; in 90 per cent. of the cases it occurs in both eyes, and terminates in complete blindness in more than 50 per cent. In conclusion, the author states that, according to statistics, pregnancy, the puerperium and lactation are etiological factors in about 0.21 per cent. of all eye diseases, and are the cause of blindness in 0.36 per cent. of the blind of the kingdom of Wuerttemberg. Even if pregnancy takes a normal course, changes in the eyes may be observed—*e. g.*, amblyopia, disturbances of accommodation, insufficiency of the *interni* and hemeralopia. Lately Bosse found that beginning with the seventh month of pregnancy a *neuritis optica* occurs in a great number of pregnant women. During the ninth month of pregnancy about 75 per cent. of all pregnant women show distinct signs of this disease, which *post-partum* gradually disappear. Between the third and tenth day after confinement, however, about 50 per cent. still show changes of the papilla.—*Muenchn. mediz. Wochenschr.*, June 25, 1901.

MEDICINE.

Recurrent Hemichorea Treated by Hypnotic Suggestion.—Dr. Paul Faraz reports a case of hemichorea, which had existed for three months, cured in one seance of hypnotic suggestion. The patient, a girl of nineteen years, had her first attack of chorea three years before, when she received a hurried intimation that her mother was desperately ill. It took her six months to recover. This year her mother died. The hemichorea appeared again immediately. Besides, there was marked hemianesthesia, right-sided, as was her original attack, and insomnia. She dreamed a great deal. Faraz made the diagnosis of hysterical hemichorea, and promised to cure her in one sitting. He hypnotized her and promised her that the movements would cease when she awakened. She found this to be true. Faraz showed her that she could move her hands voluntarily. Massage and electricity soon effected a perfect cure. She regained fifteen pounds in weight in two months and is now perfectly well.—*L'Independance Medicale*, No. 22, 1901.

Relation Between the Bile and the Production of Hippuric Acid.—S. Rosenberg (*Centralblatt fuer innere Medicin*, July 20, 1901) investigated the validity of the conclusions recently reached by Zimmermann. The latter decided that when bile was absent from the intestine that benzoic acid no longer produced hippuric acid in the organism through synthesis with glyocol, and that the latter substance is produced from glycocholic acid after its absorption from the intestine. As was to be expected, Rosenberg offers strong proof that these conclusions were at least too far-reaching and probably essentially incorrect. He made a gall-bladder fistula in a dog and allowed the bile to discharge through this, preventing the dog from lapping any of the discharged bile. Probably no bile reached the intestine, and at any rate dog's bile contains but traces of glycocholic acid, if any at all. Yet the urine of the dog contained hippuric acid in considerable quantity after the administration of benzoic acid, while none was found when benzoic acid was withheld. There was not the faintest evidence of absorption of bile into the circulation, so Rosenberg decided that Zimmermann's conclusions were incorrect; and since then he has found that Kuehne and Hallwachs had performed the same experiments with the same results nearly fifty years ago, and that Bunge and Schmiedeberg showed that the injection of benzoic acid is followed by hippuric acid synthesis in frogs, even after extirpation of the liver. He believes that the bile cannot be the only source of glyocol.

The Use of Drugs in Pulmonary Tuberculosis.—W. R. Huggard, in the *Philadelphia Medical Journal* for August 31, 1901, speaks of the treat-

ment of pulmonary consumption by drugs. He states that his line of treatment is determined by the digestive system, by the general health and by the state of nutrition. Persistent pyrexia calls for salol with quinine and arsenic or iron to combat the accompanying malnutrition. Excessive cough and expectoration, showing active softening, call for formaldehyde vapor, creosote and its derivatives, terpen hydrate, etc. In sluggish softening, counter-irritation by iodine or fly-blisters is called for. When an old syphilitic taint is present, its removal should be our first care.

Membranous Colitis.—Charles Douglas (*Journal A. M. A.*, August 31, 1901) reports three cases of membranous colitis, all occurring in infants over six months. He attributes them to bacterial infection, and reports that colon bacillus and the proteus vulgaris were obtained in culture from the membranes—a fact which does not at all suffice to warrant him in concluding that these agents were the cause of the membrane formation.

Leprosy in St. Louis.—During the past month a case of leprosy has been discovered in St. Louis in the person of a Chinese laundryman. An extended article on this case, together with pathological findings, will be found in another part of this issue, written by Drs. Engman and Faller. The main interest about the case is that the individual has been in the city ten years, engaged in his occupation of laundryman. We all know the manner of laundering among the Chinamen—they sprinkle the articles of wearing apparel by forcibly ejecting water from the mouth. The lepra bacillus was demonstrated in the nasal secretion of this man, and it is more than probable that it gains entrance to the mouth from the nose. Just think of the menace to the public health this man has been! It is a rather grewsome thought to consider that leprosy may be found in quite a few of the almond-eyed individuals who glory in the sobriquets of "Sam Kee," "Lum Chum," etc., and who constitute a goodly percentage of our citizens.

Something like a rigid inspection of the Chinese contingent of our cities should be made in order that the disease may be recognized and isolated when discovered. 'Twas by mere chance that this patient came under the attention of experts, who recognized the disease immediately. The case offers a warning to the community and to the public health officials. It is interesting to know that the case referred to will be held in isolation at the quarantine station of St. Louis, the officials finding it necessary to erect a special building and engage a special attendant for the unfortunate Celestial.

OPHTHALMOLOGY.

Edited by JOHN GREEN, JR., M. D.

Post-Partum Metastatic Panophthalmitis.—(W. L. Pyle, Philadelphia, *American Medicine*, vol. i., No. 6.) The rarity of this affection is unquestionably due to the universal adoption of aseptic and antiseptic methods in obstetric practice.

The ocular manifestations occur from the fifth to the fifteenth day after delivery, and may be monolateral or bilateral. Usually there are local symptoms, such as vulvitis, vaginitis, etc., but the affection "may follow an apparently normal labor."

Varieties are described: (*a*) An *acute* form, beginning with loss of vision, injection of the globe, iritis and hypopyon, and developing into a violent, intensely painful panophthalmitis, with rupture of the sclera and infiltration of the orbit; (*b*) a *less acute* form which runs its course without pain or orbital involvement and leads to atrophy of the globe.

Septic emboli (*streptococcus pyogenes*, *staphylococcus pyogenes aureus*, *pneumococcus*, etc.) have been demonstrated in the choroid and retina. The initial lesion is probably a retinitis.

Treatment consists of atropin, hot compresses and scleral incision to evacuate pus, with gauze drainage and irrigation. Enucleation and evisceration are condemned as possibly leading to meningitis.

Death Following Extraction of Cataract.—(A. Trousseau, *Annales d'Oculistique*, March, 1901.) Trousseau believes that a fatal termination following extraction is more frequent than is generally supposed. He acknowledges two deaths, and has had three cases in which the life of the patient was in serious jeopardy. Extreme age (eighty years and over) is deemed of graver prognostic significance than constitutional vice—*e. g.*, diabetes.

Mental disturbance, fear of suffering, anxiety lest the success of the operation be nullified by untimely movements, fear of darkness resulting from the binocular bandage, anxiety as to the final result, fatiguing journeys preceding operation, and change of habits are some of the factors leading to nervous irritability.

Passive pulmonary congestion is favored by prolonged recumbent posture.

Certain deaths are probably purely coincidental. Female, seventy-six years, in excellent health, was operated, without previous warning, on the occasion of her first visit to the clinic. During the night she suffered a cerebral apoplexy, to which she succumbed forty-eight hours later.

Pulmonary congestion was responsible for a fatal termination in an old lady of eighty, in whom there was no suspicion of organic disease. A similar condition was successfully combated in a man of eighty-nine by vigorous stimulation with alcohol.

In conditions of constitutional dyscrasia the operation itself may precipitate a fatal issue. Motais (*Soc. franc. d'Opht.*, 1899) observed two cases of diabetic coma after extraction. Fromaget (*Annales d'Oc.*, March, 1900) gives the history of a uremic intoxication with anuria lasting thirty-six hours, where previous urinalysis was negative.

Unfavorable symptoms following extraction are restlessness, slight delirium, dry tongue, and diminution of urine.

The Use of Sulphate of Copper in Affections of the Cornea and Affections of the Lid Other Than Trachoma (*Med. Rec.*).—After extensive trial, Clai-borne is convinced that the cupric sulphate crayon is of very positive advantage in many inflammatory conditions of the conjunctiva and cornea other than trachoma. Particularly amenable to this treatment are cases of persistent superficial keratitis associated with a succulent "velvety" conjunctivitis of the upper lid. Good results also obtained in chronic conjunctivitis with thickened lids and blepharitis, chronic conjunctivitis associated with slit canaliculi and dacryocystitis, "pink eye," follicular disease and "sand" conjunctivitis. Dense corneal maculæ subsequent to recurrent attacks of phlyctenular keratitis cleared up surprisingly.

The therapeutic efficiency of the blue stone is ascribed partly to "irritation," but rather more to "disinfection and cauterization of the lids."

The technique of the application is as follows: A metal probe wrapped with cotton is placed in a bowl of water which the patient holds against the cheek. The upper lid is everted, and the application made to the *under surface of the lid only*. The crayon is similarly stroked across the lower cul-de-sac. The surplus copper is washed with water and removed from the lower fornix with the probe.

No atropin is used at any stage of the treatment.

PATHOLOGY AND BACTERIOLOGY.

Edited by R. B. H. GRADWOHL, M. D., Consulting Pathologist, St. Louis City Hospital.

Lipoma Arborescens.—Michaelow (*Russ. Archiv. der Pathologie, klin. Med. und Bakteriologie*, 1901) says that lipoma arborescens is not a lipomatous growth. It consists of a chronic inflammatory hyperplasia of the synovial membrane. The most frequent cause of this affection is a long-standing tuberculous affection where there has been an absorption of the toxins. The writer describes an operation for the removal of such a growth from the musculus extensor carpi radialis, giving two illustrations of the tumor.

The Artificial Production of Connective Tissue by Means of the Injection of Agar-Agar.—Kramer (*Annals of Surgery*, August, 1901) says that in a search for a substance with which to tampon the thoracic cavity in cases

of penetrating wounds of the chest, it seemed desirable for many reasons to use something which might be introduced in a fluid state but which would solidify at the temperature of the body. With this end in view experiments were made with a neutral four per cent. solution of agar-agar in physiologic salt solution. Injections were made into the thoracic cavities of a number of rabbits, and after stated intervals the animals were killed and the injected mass examined. Microscopic pictures were obtained which showed conclusively that organization had taken place in the injected agar. The writer gives illustrations showing this organization. The process is analagous to the organization which takes place in cases of thrombosis, to-wit: there was first an infiltration of round cells into the mass, followed by the formation of new blood vessels beginning at the periphery. The paper is highly interesting and offers a new field for surgeons in such cases. It may be possible to apply this mothod of injection in the treatment of aneurism in addition to the routine treatment of thoracic wounds.

Specific Blood Changes After the Injection of Urine.—Shattenfroh (*Muenchener med. Wochens.*, July 30, 1901) undertook to determine whether specific blood changes followed the injection of urine from one animal into another. Positive results were obtained by him. Rabbits were injected subcutaneously with urine from man, horses and goats. It was found that the blood serum of rabbits which had received injections of human or goat urine possessed agglutinating properties towards the red blood corpuscles of these animals—*e. g.*, man and goats. Rabbits' serum showed distinct agglutination of human blood, provided the rabbits had received subcutaneous injections of human urine. The blood serum of rabbits which had received injections of horses' urine showed no reaction. The experiments have some bearing on forensic matters, inasmuch as this procedure may be the means of throwing some light on the identification of blood from various sources.

Gonorrheal Endocarditis.—Michaelis demonstrated before the Berlin Medical Society (July 8, 1901) a case of gonorrheal endocarditis, where the gonococcus was found both in cut sections and in pure culture. The case was a man with "fresh" gonorrhea, who entered the hospital with a chill and fever. There was a diastolic murmur over the aorta, and the diagnosis of endocarditis gonorrhoeica aortica was made. At the autopsy the heart was cut out with aseptic precautions. Pure cultures were obtained of the gonococcus from the valves. The first case of the disease was reported from Leyden's clinic; since then fifty-five cases have been reported, most of them being gonococci in sections of the heart, some in pure culture.—*Centralblatt fuer innere Medicin*, No. 31.

DERMATOLOGY AND SYPHILIS.

Edited by MARTIN F. ENGMAN, M. D., Chief of Dermatological Clinic, Polyclinic, Medical Department Washington University.

Report of a Case of Corymbose Syphilis.—(By Arthur Whitfield, M. D., M. R. C. P., *Brit. Jour. Derm.*, August, 1901.) The great rarity of this form of syphilitic eruption, and the doubt as to its time of appearance in the course of the disease, have led the author to report the study of this interesting case.

The patient, aged twenty, came for treatment a few days over two months after the initial sore. He was greatly emaciated. He gave no history of tuberculosis, but a strong one of alcohol. The face was of a livid redness, and was covered with enormous papules scattered without arrangement; also upon the scalp, where patchy alopecia had occurred. The lesions were much deeper, larger and more severe than one usually sees so early in the disease. The trunk, limbs and penis were covered with similar papules, while the palms and soles were free. The tongue and lips showed erosions; the throat greatly congested, and the tonsils covered with a fibrinous membrane without ulceration. He was put under specific treatment, and considerable benefit was noticeable until six weeks afterward, when there was noticed this corymbose condition: "Around each large papule on the extensor surfaces of the arms and back there had sprung up a small constellation of miliary papules, most being situated at the orifices of the hair follicles," while the large papules were undergoing central involution.

The interesting point is the time of the appearance of this syphilide and its nature; some authors (Joseph) drawing attention to its microscopic similarity to tuberculous lesions. The author excised a piece and took half for an injection into a guinea-pig, which remained healthy, showing no tuberculous condition. The other half he studied microscopically. The epidermic changes were secondary. At the mouth of the hair follicles there is a horny plug. In the center the chief infiltration is about the hair follicles, sweat-glands, and in the papillary body. About the vessels is the usual mantle of plasma cells. The fibrous tissue is rarefied in the infiltration area. The author finds giant cells, epithelioid cells and lymphocytes, similar to a tuberculous lesion, and remarks: "*It would be quite impossible to distinguish the two diseases from the appearance of the nodule alone.*"

As to the production of the satellite concentric arrangement, the author is more inclined toward the local metastatic theory, as occurs about malignant tumors. (The abstractor has noticed this form of eruption quite frequently in prostitutes.)

Preliminary Note Upon the Injections of Cacodylate Iodo-Hydrargyri in Syphilis.—(By MM. Brocq, Civatte and Fraisse, *Annals de Derm. et de*

Syph., July, 1901.) The cacodylate iodo-hydrargyri is obtained by neutralizing the cacodylate acid of mercury with soda in the presence of iodide of soda. It is soluble in water, perfectly stable preparation, irreducible by light, and gives no precipitate when in the presence of blood serum. The solution is also perfectly limpid and can be preserved indefinitely. 1 c. c. of this mixture contains: 4 milligr. of biniodide of mercury; 4 milligr. of iodide of sodium, and about 3 centigrammes of cacodylate of soda. The dose is 1 c. c. of the solution every day, injected into the upper and inner part of the buttocks.

The conclusions of the authors are as follows:

1. Under the name of cacodylate of iodine-hydrargyri they do not designate a definite salt, but a preparation in which is found associated in a special chemical reaction arsenic, iodine and mercury under the respective forms of cacodylate of soda, iodide of soda and biniodide of mercury.

2. This preparation has the advantage in being soluble in water, sterilizable at 120° C., and is mixable in blood serum without any form of precipitate.

3. The subcutaneous injections are well borne and cause little or no pain, nor abscesses.

4. It is above all indicated in syphilis where there is a denutrition, emaciation or neurasthenia; in the rebellious secondary manifestations of the skin and mucous membranes where there is a complication of seborrhea, and in the tertiary accidents when complicated by disturbances of the digestive tube.

A Case of Salipyrin Intoxication.—(Dr. Alfred Bruck, *Dermatologisches Centralblatt*, February, 1901.) Dr. Bruck reports an eruption upon himself, caused by the ingestion of 1.0 of salipyrin, the drug having been taken for a slight fever which was caused by "taking cold." Three or four hours after taking the drug in cognac and water, he noticed upon the right hand, chiefly upon the interdigital folds and especially between the thumb and the index finger, toward the dorsal side, large red spots, accompanied by very unpleasant burning and itching. The skin was hot and tense without marked swelling. Soon a similar condition appeared upon the left hand. The next morning the eruption had spread perceptibly. Larger and smaller irregular round macules appeared upon the third and fourth fingers of both hands and upon their dorsal surfaces. Upon the volar side small patches appeared in the corpo-metacarpal region. Symmetry was very marked. At other parts only the inner surface of the lips and glans penis were attacked. Upon the penis the eruption showed a preference for the dorsal surface, as was apparent upon the hands; here the objective symptoms were not as prominent as upon the hands.

The following day the process upon both upper extremities was still

spreading and the burning and itching were more intense. Herpetic vesicles formed upon the glans penis, especially in the sulcus.

The temperature was very slightly increased; pulse somewhat rapid; patient felt weak and giddy. One gram of phenacetin was now given and a menthol salve applied. The redness rapidly subsided while the vesicles became dry and scaly, recovery being rapid and complete.

A Case of Acne Keratosa.—(H. Radcliffe Crocker, *Brit. Jour. Derm.*, August, 1901.) This is a disease of which Dr. Crocker has written a great deal in the last few years. He adds another case to the list: Miss F., aged thirty, had had the disease seven years. The lesions occur chiefly upon the cheeks as red, hard, flattish swellings the size of a finger-nail, surrounded by smaller ones of the same type, attended by great heat and itching, compelling her to pick them to get out a "white core," of which there were often two or more. When these came out she got relief, the lesions promptly healing.

Treatment of Ring-Worm With Mono-Chlorphenol.—(M. Barbe, *Annal. de Derm. et de Syph.*, July, 1901.) Barbe has for a long time employed this remedy in ring-worm and extols its efficacy. The solution (20-100) should be applied once a day for several days. It cures the plaques of ring-worm without desquamation or that intense brown discoloration caused by the use of iodine, two advantages not to be overlooked in the treatment of a disease which so often occurs upon exposed parts of the body. There is only slight smarting and redness at the moment of its application.

A Case of Leprosy.—(Burnside Foster, M. D., *Jour. Am. Med. Asso.*, August 31, 1901.) The chief reason the author has for reporting this case is that he desires to put it on record as the only case of leprosy known to have been born in the State of Minnesota or in that part of the country. He remarks: "You are all familiar with the statement, so frequently made, that all the cases of leprosy in the Northwest have their origin in some leprous district of some other country, and that for some unexplained reason the disease was never communicated to others here, although there has been abundant opportunity for such communication. This case puts the matter in a new light."

The patient, twenty years of age, was born in Minnesota, and has never been out of the State. His father, two sisters and one brother are living and well. The other brother died of leprosy. This brother had been nursed in infancy by a woman who had two leprous brothers.

BOOK REVIEWS.

Davis's Obstetric and Gynecologic Nursing. By E. P. DAVIS, A. M., M. D., Professor of Obstetrics in Jefferson Medical College and Philadelphia Polyclinic. 12mo, volume of 402 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Co. 1901. Price, \$1.75, net.

This volume is designed to furnish instruction as to the various duties of the obstetric and gynecologic nurse. Obstetric nursing demands some knowledge of natural pregnancy, and of the signs of accidents and diseases which may occur during pregnancy. It also requires knowledge and experience in the care of the patient during the labor and her complete recovery, with the needs of her child. The obstetric nurse must also know how to help patient and doctor in the accidents and complications of labor, and has an important part to play in caring for mother and child in the diseases which occasionally attack them during the puerperal period. Gynecologic nursing requires special instruction and training, and a thorough knowledge and drill in asepsis and antisepsis are absolutely indispensable. These points are all well attended to in this book, which is a complete and satisfactory volume.

Sexual Hygiene. Compiled from books, articles and documents, many not heretofore published. By the Editorial Staff of the Alkaloidal Clinic. 270 pages. Price, \$1.00, post-paid. Published by the Clinic Publishing Co., Ravenswood Station, Chicago, Ill. 1901.

This important subject is reviewed and discussed under the following chapter headings: Preliminary Considerations; The Physicians' Club; Religion and Love; Sexual Frauds; Sexual Excesses; The Effect of Coitus During Pregnancy and Lactation; Sex Problems in Education; Legal Aspects; Educational Aspects; Editorial Résumé; Woman Sexually; Imperfect Development of the Female Sexual Organs; Affections of the Male Sexual Organs Causing Impotence; Continence; Masturbation; Incomplete or Delayed Intercourse, etc.

This book contains a number of papers read before the Physicians' Club of Chicago, many of which have never before been published. It goes into the subject at length, and gives information on matters of sex that could not be obtained in any other book, as the subject-matter has never before been published. The psychical side of the question is well treated. No physician should fail to keep himself informed on this subject. It involves questions which come up day after day in medical practice. Krafft-Ebing has given us in his *Psychopathia Sexualis* an extensive consideration of this subject. This volume, *Sexual Hygiene*, goes into the matter in a different way, aiming to show the relationship between this subject and

The most Perfect Form of Dosimetry is afforded by

PARVULES

THE term Parvule, from *Parvum*, (small) is applied to a class of remedies (Warner & Co.'s) in the form of minute pills, containing minimum doses for frequent repetition in cases of children and adults. It is claimed by some practitioners that small doses, given at short intervals, exert a more salutary effect. Sydney Ringer, M. D., in his recent works on Therapeutics, sustains this theory in great variety of cases. 20 cents per 100.

PARVULES OF CALOMEL, 1-20.

MED. PROP.—ALTERATIVE, PURGATIVE.

Dose.—1 to 2 every hour. Two Parvules of Calomel, taken every hour until five or six doses are administered (which will comprise but half a grain), produce an activity of the liver which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

PARVULES OF CALOMEL AND IPECAC.

R Calomel, 1-10 gr.
Ipecac, 1-10 gr.

MED. PROP.—ALTERATIVE, PURGATIVE.

Dose.—1 to 2 every hour. Two Parvules of Calomel and Ipecac, taken every hour until five or six doses are administered (which will comprise but a grain of Calomel), produce an activity of the liver, which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

PARVULES OF ALOIN, 1-10.

MED. PROP.—A MOST DESIRABLE CATHARTIC.

The most useful application of this Parvule is in periodic irregularities—Dysmenorrhœa and Amenorrhœa. They should be given in doses of one or two every evening at and about the expected time.

Dose.—4 to 6 at once. This number of Parvules, taken at any time, will be found to exert an easy, prompt, and ample Cathartic effect, unattended with nausea, and in all respects furnishing the most aperient and cathartic preparation in use. For habitual constipation, they replace when taken in single Parvules the various medicated waters, avoiding the quantity required by the latter as a dose, which fills the stomach and deranges the digestive organs.

PARVULES OF PODOPHYLLIN, 1-40.

MED. PROP.—CATHARTIC, CHOLAGOGUE.

Two Parvules of Podophyllin, administered three times a day, will re-establish and regulate the peristaltic action and relieve habitual constipation, add tone to the liver, and invigorate the digestive functions.

PARVULES OF NUX VOMICA, 1-50.

(WARNER & CO.)

Nux Vomica, according to Dr. Ringer, is possessed of real curative powers for sick headache, accompanied with acute gastric catarrh, whether due to error in diet, constipation, or to no apparent cause. He regards it, administered in small and frequently repeated doses, as useful in many disturbances of the gastric functions.

SUPERIOR TO PEPSIN OF THE HOG
INGLUVIN

A Powder—Prescribed in the same manner, doses and combinations as pepsin.

A SPECIFIC FOR VOMITING IN GESTATION IN DOSES OF 10 to 20 Grains.

WILLIAM R. WARNER & CO.

PHILADELPHIA
NEW YORK
CHICAGO

LARGEST PILL FACTORY IN THE WORLD.

For sale by all druggists or sent by mail on receipt of price. Physicians' private formulæ made up in lots of 100 and over. Pills, granules or compressed form. Write for quotations.

the problems of practice of medicine. It will be found invaluable to the practitioner.

Atlas and Epitome of Labor and Operative Obstetrics. By DR. O. SHAEFFER, of Heidelberg. From the fifth revised German edition. Edited by J. Clifton Edgar, M. D., Professor of Obstetrics and Clinical Midwifery, Cornell University Medical School. With 14 lithographic plates, in colors, and 139 other illustrations. Philadelphia and London: W. B. Saunders & Co. 1901. Cloth, \$2.00, net.

This volume of Saunders' medical hand atlases deals with normal and pathological labor and with all the obstetrical operations. It forms a combination and completion of the atlas reviewed above. This volume will prove of special value to the practitioner who neither during his college course nor subsequently has had the opportunity of observing many of the relatively rare pathological obstetrical cases. Excellent illustrations give instructive pictures of all the possible normal and abnormal conditions in obstetrical practice. Concise data enable the physician to understand clearly the condition he has to deal with. Numerous illustrations show him how to perform the necessary operation.

These two atlases, which include the whole domain of obstetrics and contain more than three hundred splendid illustrations, have gained a prominent place as practical manuals in Germany. We venture to say that the careful English translation of J. Clifton Edgar, M. D., will before long enjoy a like popularity and esteem in America.

Studien fuer Geschichte des menschlichen Geschlechtslebens. Das Geschlechtsleben in England mit besonderer Beziehung auf London. By DR. EUGEN DUEHREN. Published by H. Barsdorf in Charlottenburg, Berlin. Vol. II. 445 pages. Price, 10 marks.

The aim of the author is to give in consecutive form a picture of human culture in so far as it pertains to the sexual life of the different nations. The first volume, published previously, deals with the conditions in France; the present volume with the conditions in England in general and London in particular. In the preface Duehren gives the views of Milton, Kant, Taine, etc., on the cause of the sexual peculiarities observed in the English race. These are considered from two standpoints, viz., marriage and prostitution. A number of important phenomena are alluded to by the author, who everywhere shows a familiarity with the world's literature. He has collected the opinions of many prominent writers, thereby avoiding to a large extent a too subjective consideration of the problem.

A right understanding of sexual life is a matter of great importance, especially for the physician, who will find in this book much valuable information.

Predigested Beef

Is the basis of **Armour's Nutrient Wine of Beef Peptone**, a preparation presenting the entire digestible substance of prime, lean Beef, in a form requiring no effort of the digestive organs to render it diffusible.

Nutrient Wine

Is especially indicated in the treatment of all cases of faulty nutrition occasioned by gastric weakness, Ulceration of the Stomach, Phthisis, Typhoid Fever, and wherever a readily assimilable food is required.

Manufactured by

ARMOUR & COMPANY
CHICAGO

FORUM OF THE NEWER REMEDIES.

The object of this department is to give our readers reliable information and independent criticism of newer therapeutic agents, particularly proprietary products of known formulæ which are introduced only to the medical profession. Communications, clinical reports and notes from reputable physicians will be published. Where requested, the contributor's name will be withheld.

Maltine with Creosote.—The writer has used this combination of creosote with maltine in both private practice and in the wards of the St. Louis City Hospital, and regards it as one of the most useful of the maltine series.

Creosote is a drug which requires special care in its administration, and must be given in a vehicle which will counteract its disagreeable features. Maltine makes just such a desirable vehicle. The creosote is made more palatable and is more readily assimilated when combined in this way. In addition to this, the strengthening and tissue building elements of maltine come into good play in all diseases where creosote is indicated.

The writer has made extended use of this preparation in a variety of cases and has had excellent results therefrom. A few cases are here appended.

CASE 1.—M. F., laborer, aged 47 years; has had chronic bronchitis for a number of years, especially severe each winter. When first seen he had been unable to work for two months and was confined to his bed most of the time. Had severe cough with copious expectoration. He has been gradually losing strength and weight and has been having drenching night-sweats. Examination of lungs showed evidences of diffuse bronchitis and infiltration of left apex. A few tubercle bacilli were found in the sputum.

He was put on full doses of maltine with creosote. Improvement was gradual but satisfactory. His cough became much less severe; he improved in weight and strength, and night-sweats ceased. At the time of last examination he was able to work and was, in short, enjoying better health than he had enjoyed for years.

CASE 2.—T. J., aged 24 years; history of scrofulous diathesis; had been troubled for several years with an abnormal frequency of micturition, the act being usually followed by a stinging, sharp pain. General health was not good. Examination of prostate showed some enlargement, with small nodules scattered over the surface. A diagnosis of chronic tubercular prostatitis and cystitis was made. After three months' administration of maltine with creosote there was marked improvement in the general health of the patient, and his urinary symptoms were almost entirely gone.

The remedy was given in a number of cases of phthisis in all stages



HYDROZONE (30 vol. preserved H₂O₂ solution.)

IS THE MOST POWERFUL ANTISEPTIC AND PUS DESTROYER.
HARMLESS STIMULANT TO HEALTHY GRANULATIONS.

GLYCOZONE (C. P. Glycerine combined with Ozone.)

THE MOST POWERFUL HEALING AGENT KNOWN.

**Cures quickly CHRONIC AND ACUTE ULCERS (Specific or not),
SKIN DISEASES, ECZEMA, PSORIASIS, SALT RHEUM,
ITCH, BARBER'S ITCH, CHILBLAINS, RING WORM,
IVY POISONING, ACNE, Etc.**

Send for free 300-page book "Rational Treatment of Diseases caused by Germs," containing reprints
of 140 scientific articles by leading contributors to medical literature.
Physicians remitting 50 cents will receive one complimentary sample of each "Hydrozone"
and "Glycozone."

Hydrozone is put up only in extra small, small, medium and large size bottles bearing a red
label, white letters, gold and blue border with my signature.

Glycozone is put up only in 4-oz., 8-oz. and 16-oz. bottles bearing a yellow label, white and
black letters, red and blue border with my signature.

Marchand's Eye Balsam

cures all inflammatory and contagious diseases of the eyes.

DISTRIBUTING AGENTS:

Thomas Christy & Co., 25 Lime St., London, Eng.

Leeming, Miles & Co., 53 St. Sulpice St., Montreal, Can.

Beckett, Zeilin & Co., 220 Sutter St., San Francisco, Cal.

E. H. Buehler, 134 Lake St., Chicago, Ill.

John W. Lehman, 428 Camp St., New Orleans, La.

PREPARED ONLY BY

Charles Marchand

Chemist and Graduate of the "Ecole Centrale des
Arts et Manufactures de Paris" (France).

57-59 Prince St., New York.



SOLD BY LEADING DRUGGISTS.

AVOID IMITATIONS.

MENTION THIS PUBLICATION.



Scott's Emulsion gives cod-liver oil a pass-
port into the sensitive system. None of
the oil is left out. It passes through the
walls of the alimentary canal in full
strength carrying with it all of its mysteri-
ous medical qualities.

Scott's Emulsion has been the standard
preparation of the whole oil for twenty-
five years.

SCOTT & BOWNE, Chemists, 409 Pearl St., New York.

of the disease. In those unfortunate cases where no cure could be expected, the results were nevertheless very gratifying in the alleviation of distressing symptoms. Another case coming under the writer's observation in the City Hospital might be cited. The patient was a man of forty years, who had been suffering with an attack of grippe-pneumonia. After the subsidence of the acute symptoms it was found that his left apex showed signs of tubercular involvement, as later sputum examination showed the presence of tubercle bacilli. His condition was extremely deplorable, there being marked emaciation, weakness and a hacking cough. He was put on the maltine with creosote, and at the end of the month during which he was under the writer's observation, he had picked up six pounds in weight and was in a far better state than he had been before the institution of this medication. As a routine prescription in all cases of tuberculosis and in many other diseases, especially of the respiratory tract, maltine with creosote will be found most valuable.

Pepto-Mangan (Gude).—(Abstract of a report by H. D. Peterson, M. D., Chicago, Ill.) Iron in any form acts upon the human system in three ways: First, by increasing the oxygen-carrying power of the red blood corpuscles. Second, by changing the oxygen in the tissues into ozone. Third, by its general astringent effect.

Iron acts not only as a food to the tissues, but is at the same time a stimulant, and by this effect upon the blood-making organs it increases the number of red corpuscles. It also stimulates the heart muscle and slightly contracts the arterioles, in this way increasing blood pressure.

Its general effect is tonic and is, therefore, very useful in cases of general debility.

It constitutes an important part of the blood, and by diminution of its proper proportion will produce ill effects, as shown, for example, by anæmia. When any such ill results occur we seek to restore the balance by supplying artificially the lacking element. The methods which will nearest approach nature's efforts are those which recommend themselves as best for adoption. Gude's pepto-mangan seems to meet the requirements as well as any preparation of iron, as it is nearest to the form found in the blood. It is a neutral solution of iron and manganese, two well-known restoratives, and recommends itself in that it is easily absorbed by the digestive tract without any disturbance of the same, is not injurious to the teeth, and produces no constipation.

The indications for its use are the same as for any preparation of iron, viz.: anæmia, constipation, dysmenorrhœa, etc. Not every case treated with iron, regardless to the form or preparation used, is brought to a successful termination, as in many such there is some condition which prevents proper action, viz.: weak or irregular digestive tract. On account of its mild action Gude's pepto-mangan acts so well, these conditions being themselves indications for iron. The following cases are illustrative

SAPOZIN.

(TRADE MARK REGISTERED.)

The perfect baby powder. Exquisitely soft and light. Cooling and comforting. Prevents chafing and redness. Turns the water off the skin, and keeps it soft and cool. Never cakes nor becomes damp nor sticky.

Sample free to physicians on receipt of card.

Twenty-five
cents a box

McKESSON & ROBBINS
NEW YORK.



DISSOLVE ON THE TONGUE

Antikamnia & Heroin Tablets

(5 GR. ANTIKAMNIA, 1/12 GR. HEROIN HYDROCHLOR.)

A RESPIRATORY STIMULANT, SEDATIVE, EXPECTORANT AND ANALGESIC
IN THE TREATMENT OF
COUGHS, BRONCHITIS, LARYNGITIS, PNEUMONIA, DYSPNOEA, PHTHISIS, CORYZA,
WHOOPIING COUGH, ASTHMA, HAY FEVER, COLDS, ETC.

➤➤➤ DOSE: ONE TABLET EVERY TWO, THREE OR FOUR HOURS AS INDICATED ◀◀◀

- SAMPLE BOX FREE TO PHYSICIANS -
ADDRESS

THE ANTIKAMNIA CHEMICAL COMPANY - ST. LOUIS, U.S.A.

of its value as a restorative. In these cases the Thoma-Zeiss hæmometer was used to count the corpuscles.

CASE 1.—Ellen C., aged twenty-eight, married five years. She was confined three months ago, after a prolonged, exhausting labor. So much blood was lost that she was left in an extremely anæmic condition. She improved so very slowly that four weeks ago she was placed upon Gude's pepto-mangan in one-drachm doses, in milk, three times a day. The blood count at commencement of the treatment showed 2,600,000 red corpuscles to one c.m. The first sign of improvement was redness of the lips and better appetite. She soon began to gain in strength and flesh, and one week ago the red corpuscles had increased to 3,700,000 in one c.m. She now says she feels as well as ever, and her appearance would warrant the statement.

CASE 2.—General anæmia in a young girl of sixteen years. When first seen she was pale, thin, and was badly constipated. There was almost constant headache, and she had but very little appetite. She first menstruated at her fourteenth year, but has not been regular for over a year. The corpuscle count was 3,000,000 to one c.m. Gude's pepto-mangan in drachm doses three times a day, in milk, was given for a period covering four weeks. In two weeks after beginning the treatment she began to have some color in the lips, and from that time on rapidly improved in all symptoms, and now has no trouble except with the menstrual function. The blood at last count, one week ago, was 4,000,000 to one c.m.

CASE 3.—Geo. W., aged twenty-seven, typesetter. Has not felt well for the past year. Is badly constipated, has a feeling of lassitude, headache most of the time. Poor appetite, tongue flabby, pale, and thickly coated. Blood count 2,800,000 to one c.m. Four weeks of treatment with Gude's pepto-mangan has caused a marked improvement in his condition. He feels much stronger, and can do his work without the fatigue formerly experienced. The appetite is much improved, and his tongue is clear. Blood count now shows 3,600,000 red corpuscles to one c.m.

CASE 4.—Edward C., aged fifteen, office boy. When first seen he was very thin and pale, lips almost colorless. Complained of shortness of breath and palpitation on hurrying upstairs, as he was often required to do. Gude's pepto-mangan in drachm doses three times daily caused very rapid improvement. He has gained in weight and color, and has more appetite. After three weeks' treatment blood count showed an increase from 2,800,000 red corpuscles to 3,200,000 in one c.m. He is still under treatment.

Interstate Medical Journal.

OCTOBER, 1901.

EDITED BY

WILLARD BARTLETT, M. D.

JESSE S. MYER, M. D.

WALTER BAUMGARTEN, M. D.

WARREN B. OUTTEN, M. D.

HUGO EHRENFEST, M. D.

WILLIAM PORTER, M. D.

MARTIN F. ENGMAN, M. D.

WILLIAM E. SAUER, M. D.

R. B. H. GRADWOHL, M. D.

SIDNEY I. SCHWAB, M. D.

JOHN GREEN, JR., M. D.

JOHN ZAHORSKY, M. D.

H. McC. JOHNSON, M. D.

OTHO F. BALL, M. D. Managing Editor.

COLLABORATORS:

MAX MICHAELIS, M. D.,

JULIUS SCHNITZLER, M. D.,

Docent of Internal Medicine, University of Berlin, Germany.

Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

JULIUS NEUMANN, M. D.,

HEINZ WOHLGEMUTH, M. D.,

Docent of Obstetrics and Gynecology, University of Vienna, Austria.

Berlin, Germany.

* Address all communications to the INTERSTATE MEDICAL JOURNAL, COMMERCIAL BUILDING, ST. LOUIS, MO.

EDITORIAL DEPARTMENT.

INCREASE OF OUR EDITORIAL STAFF.

Beginning with the present issue, the INTERSTATE MEDICAL JOURNAL will be presented to our readers under the editorial management of the above staff. This change has been made with the definite idea of notably improving the value of the publication from a scientific standpoint. To this end, the personnel of the staff has been chosen so that a journal for the general practitioner shall be published containing the impress of the latest advancements in medicine both at home and abroad. Our editors will ever have in mind the needs of the general practitioner.

It will be the constant aim of the entire staff to edit a journal which shall rank among the best of the monthly journals published in this country. The publication is owned and controlled by physicians, and its policy will be untrammelled and free from any influence other than that dictated by a loyal devotion to the best interests of the medical profession.

MEDICAL INTERVIEWS ON THE PRESIDENT'S CASE.

It is deeply deplorable that President McKinley's assassination should have been regarded by many physicians as a pretext for personal exploita-

tion in the form of "interviews" in the daily press. So-called "opinions," based on newspaper accounts, prepared by lay minds for the elucidation of the lay public, can hardly be considered of much value, and when the "opinion" is evidently of secondary importance (to judge from the display type used in printing the doctor's name), the proceeding approaches dangerously near the methods of quackery.

A physician in attendance upon a public man may be justified in issuing a statement to the press, if only to prevent the publication of misleading views evolved from the inner consciousness of the reporter: in such a contingency, however, he should have the consent of the patient or the patient's relatives. Under no circumstances should a consultant or assistant divulge any facts whatsoever; his failure to keep silence can only be regarded as a serious breach of professional secrecy.

THE STAPHYLOCOCCI ENTERITIS OF BREAST-FED INFANTS.

The digestive disturbances of breast-fed infants have been mostly attributed to changes in the secretion of the mother's milk. Elaborate investigations and analyses of human milk have, however, failed to throw light on many of these disturbances. It seems, therefore, a distinct advance to refer many of these cases to infections.

Escherich and his assistant Moro have established that certain forms of diarrhea in breast-fed infants are due to the staphylococcus albus.

The clinical picture is that of an acute enteritis. The onset is sudden, with vomiting and thin serous diarrhea. There is a loss in weight, but usually no fever. The stools are thin, very acid, yellowish in color, and possessing almost the normal odor.

Microscopical examination of the feces reveals the presence of staphylococci in enormous numbers. The origin of these staphylococci has been traced to the lactiferous ducts of the mother.

Moro mentions the interesting experiment in which a healthy infant was placed to the breast of a nurse whose milk contained staphylococci in enormous numbers. The infant became sick one hour after ingesting this milk.

The infrequency of these infections must be attributed in part to a variation in the virulence of the bacteria, but to the greatest extent to the relative number present in the mother's milk. Stagnation of the milk in the ducts leads to a great increase in the number of micro-organisms.

Fortunately the prognosis is very good, the infants recovering rapidly after a few days. This convalescence goes hand in hand with a diminution of the staphylococci in the feces.

The treatment consists in the administration of rice gruel in small quantities every two hours. Breast feeding should be continued. For the pain and excessive diarrhea small doses of opium are indicated.

RING-WORM SCHOOLS.

Fortunately in St. Louis we do not encounter many cases of ring-worm of the scalp. It is here comparatively rare; even the forms of ring-worm which appear upon the non-hairy parts is rare compared to what one sees of these conditions in the east of our country and in Europe.

When the fungus infects the scalp of a child its cure is not a question of days but of months of constant care and clever treatment. Since the researches of Sabourand we know that the small spored variety (*Microsporon Audouini*) is the usual cause of this condition in the scalp.

The spread of the disease is very rapid when it enters a school or children's institution, by the rubbing together of heads or exchange of caps etc. For this reason special schools for these infected children are strongly advocated by Mr. Malcolm Morris, of London, in his third Lane lecture lately delivered in San Francisco. These children are ordered from school and therefore often lose months or years from study before they are readmitted or cured. The first step in this direction was taken by the Metropolitan Asylum Board of London, in the early part of this year, which opened a school at Witham, Essex, in February, for ring-worm infected children. Schools of this kind have also been established in Rome and in other Italian and Belgian cities.

In these crowded centers of Europe, ring-worm and also fevers are very prevalent diseases. Naturally isolation is the first and most essential step in the war against all infectious diseases. But inspection is equally as important, for without it the cases would not be identified.

Although ring-worm is not very prevalent here in the middle West, yet there are many cases of it; enough to warrant a monthly or bi-monthly inspection of the scalps of our school-children by one skilled in the detection of the disease.

CLASSIFICATION OF INTESTINAL BACTERIA.

There is no more pertinent subject in the whole domain of bacteriology than the proper classification of the various bacteria that inhabit the intestinal tract of man. There has been any number of descriptive papers written on the so-called "colon group" of intestinal bacteria. There has been much confusion in the identification of intestinal bacteria, for the reason that some varieties of one species show apparently alternating characteristics with some varieties of other species. Some varieties of the colon bacillus have been isolated by investigators which showed biologic characteristics in no way belonging to the colon family, and yet, for want of some systematic classification of such bacteria, we have been content to call them atypical forms. The experience of bacteriologists in other fields has repeatedly shown the necessity for classification first of all, if order is to be brought out of chaos in identifying different organisms possessing many characteristics in common, but differing on one or two biologic tests.

It is, of course, a matter of ease to identify the various chromogenic, spore-forming intestinal bacteria. *Prima facie* evidence certainly warrants our positive stand in regard to their early identification when we are confronted with a given case for analytical research. It is the non-chromogenic, non-spore-forming varieties which have so far proved the ban to independent workers who have had no definite classification to guide them through the intricacies of identification of intestinal bacteria. Probably the most valuable contribution to the subject of classification of the non-chromogenic, non-spore-forming intestinal bacteria is that given by W. W. Ford, in the *Journal of Medical Research*, Vol. vi., No. 1. The results of bacteriologic examination of the contents of the stomach, duodenum, cecum and rectum, from forty autopsies, furnish the basis for the compilation of this tabulated classification. The different bacteria were carried through neutral agar, neutral broth, litmus milk, potato, blood serum, potassium nitrate broth and sugar solutions, viz.: dextrose, saccharose and lactose. Two main classes were established—acid-producers and alkali-producers. To the acid-producing class belong seven groups, comprising the colon group, the *lactis ærogenes* group, the cloacæ group, four varieties of a group iv., group v., a sixth group (liquifacient group, Eisenberg), and a seventh group. The alkali-producing class show six groups—the Petrusky and Petrusky sub-group, the proteus group of six varieties, and three other groups comprising varieties which differ only in their property to liquefy gelatin, casein and blood serum in different ways and degrees.

This gives us a good working basis upon which we can build up our varieties of non-chromogenic, non-spore-forming bacteria in an intelligent manner. This promises to give us something tangible in our method of thinking in regard to the flora of the intestine of man. There are no new species pointed out by this investigator, nor is it probable that any of the individual varieties classed by him are new discoveries, but it will certainly help to make plain the whole subject of intestinal bacteria. Without his work we would still be in that darkness which has hitherto so effectually prevented one from acquiring a definite idea of what the intestinal bacteria are like; what are colon bacilli and what are not. It is a relief to know that we have done with "atypical forms," and that when we see a given bacterium breaking up saccharose and another breaking up dextrose, we shall recognize that these are different varieties, and not the same bacterium acting "anomalously," as some bacteriologic confreres would have us believe.

ORIGINAL ARTICLES.

A NEW CHLOROFORM-OXYGEN ANESTHESIA.

BY HEINZ WOHLGEMUTH, M. D., of Berlin, Germany.

Translated by H. EHRENFEST, M. D.

The ideal of every surgeon is to induce an anesthesia which as closely as possible resembles natural sleep, and which is sufficiently safe to permit him to concentrate his attention on the operation without fear that the anesthetic may endanger the patient's life or health. He will desire to see his patients recover from the narcosis with a clear sensorium, without any special untoward sequelæ. The anesthetics hitherto employed do not, in any marked degree, conform to these requirements. Gurlt's¹ statistics (1897) show for chloroform alone a mortality of 1:2039; of ether alone, 1:5090; of Billroth's mixture, 1:3870; of bromide of ethyl, 1:5228; of a mixture of ether and chloroform, 1:7594; of pental, 1:213. Rodmann² found that Schleich's mixture (ether, chloroform and petroleum ether) was more dangerous than ether and chloroform. Honigmann³ observed that a mixture of ether and chloroform frequently interfered with respiration. A slight and sometimes severe asphyxia occurred, and in several instances death resulted from arrest of respiration at the beginning of anesthesia. Having in mind these serious conditions, an eminent surgeon said: "The best of my assistants is just good enough to manage the anesthesia."

Other disagreeable symptoms and after-effects of anesthetics—incomplete relaxation, ptyalism, aspiration pneumonia, incontrollable vomiting, subsequent loss of appetite, etc.—need not be specified in detail.

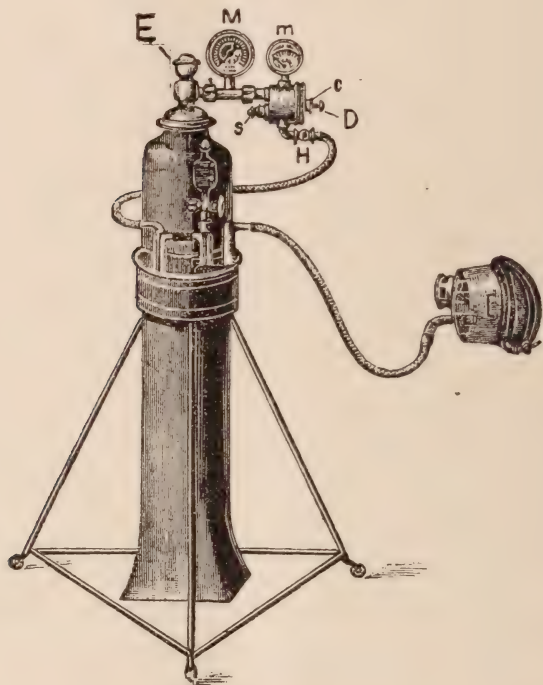
In the following I take the liberty of bringing before the profession a new method of anesthesia, which seems to promise a better fulfillment of the requirements described above. The results so far obtained are remarkably good, and justify an extensive trial. The method is an anesthesia combining chloroform with oxygen.

When first introduced as a therapeutic agent, oxygen was called "vital air." It was regarded as a *panacea* against all disease, and seemed that it fully deserved its new name, judging from the experiments of Morozzo, of Turin (1784), who succeeded in reviving asphyxiated animals by applying oxygen. Thomas Beddoes later advised its use in cases of intoxication by opium and asphyxiation by narcotics. Remarkable results were obtained by a combination of oxygen inhalation and artificial respiration in cases of asphyxia during anesthesia; and thus inhalation of oxygen after narcosis became a routine procedure with many surgeons (Landerer, Prochownik, etc.). Lately Max Michaelis reported splendid results in von Leyden's clinic with the inhalation of oxygen in various forms of dyspnea. It occurred to me therefore to diminish the dangers of

anesthesia by combining oxygen with the anesthetic itself with a view of avoiding asphyxia. After a preliminary experiment on myself I tried the method on two children, both of whom had become twice asphyxiated during previous anesthetics. The results were satisfactory and encouraged me to make further experiments which finally led to the construction of an apparatus herein described.

A steel cylinder contains a 1000 liters of oxygen under a pressure of 100 atmospheres. The gas flows with a reduced pressure of one-tenth to two-tenths of an atmosphere through a U-shaped glass tube (*vide* Figs. 1 and 2). The latter carries on one of the upright arms a little bot-

Fig. 1.



tle (G), from which chloroform is allowed to drip upon a piece of absorbent gauze (B). A cock (J) regulates the flow. Oxygen passing through the tube conveys the vaporized chloroform through a long rubber tube to the mask, which is made of transparent celluloid to permit observation of the patient's face (Fig. 3). The bent tube A, which connects with the rubber tube, may be rotated. The valve V allows the expired air to escape. The oxygen before entering into the mask passes two manometers (M and m.). The larger one, next to the cylinder, indicates the gaseous pressure within the cylinder. The smaller manometer indicates the pressure which is reduced below one atmosphere by means of the screw D. Loosening of this screw diminishes, tightening increases, the

pressure. The chloroform apparatus is placed in a little metal case for protection. The side of the U-shaped tube, which carries the chloroform reservoir, is connected with the oxygen tank, the other with the rubber tube leading to the mask. The following is a description of the mode of application: When the cock E of the cylinder is opened—cock H being closed—the large manometer shows the pressure in the cylinder, and the small one the reduced pressure, which varies according to the position of the screw D. The screw is then adjusted until manometer M shows a pressure of one-tenth to two-tenths of one atmosphere. The cock J of the chloroform apparatus is now turned until it permits the passage of one hundred to two hundred drops a minute. Finally cock H is opened. The handle of the smaller manometer at once indicates zero, and oxygen

Fig. 2.

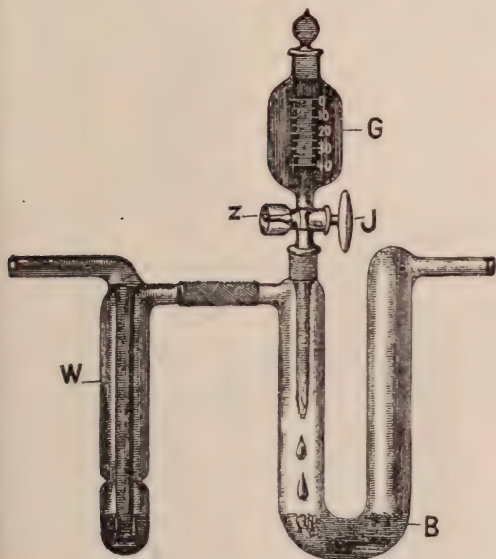
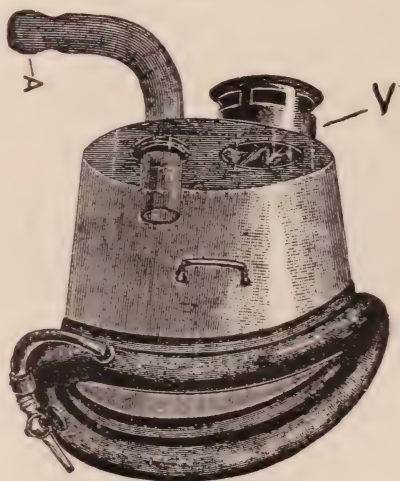


Fig. 3.



issues in continuous stream at a pressure of one-tenth to two-tenths atmosphere. Passing through the U-shaped tube, it becomes charged with chloroform vapor, which in turn is conveyed to the mask. The latter is placed over the face of the patient, who is directed to breathe deeply with the mouth open. From time to time the anesthetizer lifts the mask in order to determine by the odor the amount of the chloroform supply. If the oxygen pressure is too high or too low, the chloroform is not vaporized. In this case the screw D is readjusted by tightening or loosening about one-quarter of a rotation. The amount of chloroform is again estimated by the odor. When anesthesia has begun, the chloroform supply is reduced to thirty to forty drops a minute.

If the anesthesia is profound enough, the cock J is closed, the mask is removed and the cock H shut off in order to save oxygen.

Thus the quantity of chloroform used may, after some experience, be greatly reduced. It should be borne in mind, however, that with this method the patient quickly returns to consciousness on interruption of the anesthetic. The striking effect of this chloroform-oxygen narcosis is manifested in the following symptoms: After several inspirations the skin and visible mucous membranes become light red. Extremely anemic and weak patients exhibit a healthy color, and I observed one case in which a severe icterus was disguised by this cutaneous hyperemia. The pulse becomes slower and fuller, similar to a digitalis pulse, and its rate is nearly always about 60. Narcosis has reached the surgical stage in little children in one quarter of a minute, in larger children and women in three to seven minutes, in men five to twelve minutes. In one case a pulse-rate

Fig. 4.

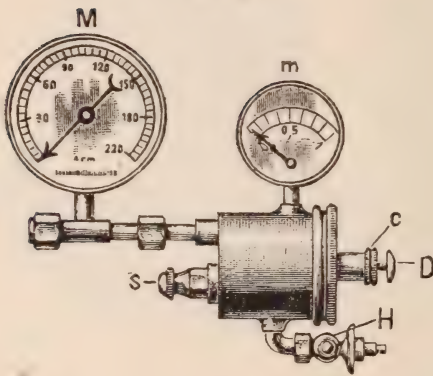
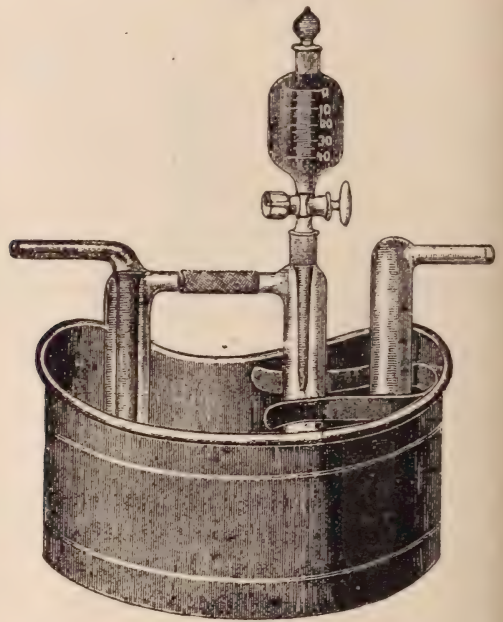


Fig. 5.



of 56, in another of 44, was observed. The rate remains practically unchanged during deep narcosis. An insufficiency in the chloroform supply with a consequent lightening of the anesthesia increases the pulse-rate. The pupillary reaction does not differ from the usual reaction in chloroform narcosis: contracted and inactive during deep anesthesia, dilated and active as the narcosis becomes less profound. Respiration is absolutely uniform, slow and quiet. On account of the abundant supply of oxygen, respiration is comparatively shallow. A stage of excitement is but rarely observed, and then, as in alcoholics, it is short and moderate in degree. Vomiting during and after anesthesia is comparatively rare. There is never an increase of secretion of mucus and saliva. The reduction of the pulse-rate to 60 is typical of this method, the rate being main-

tained whether the patient is young or old, anemic, fat or suffering from arterio-sclerosis or heart failure. The quality of the pulse, inaudible respiration, the rosy appearance of the patient, give the anesthetist a feeling of entire security; one is impressed with the idea that an asphyxia or a paralysis of the heart or respiration is highly improbable. The sensations observed when the patient is awakening are agreeable in character and wholly different from those observed after ordinary chloroform narcosis. The patients stretch themselves and sometimes yawn as on awaking from healthy sleep. They open their eyes and are fully conscious; there is no complaint of headaches or nausea; fits of weeping and hysteria, as often observed after ether narcosis, are absent.

My experience with this form of narcosis comprises, so far, more than three hundred cases. I am fully aware of the fact that this number is too small to permit of broad generalizations. Some of the features observed are, however, so striking that I believe I am justified in bringing now the results of my experience before the profession. Referring to the detailed account of one hundred and eighty anesthetics, published in *Archiv fuer Klin. Chirurgie*, 1901, vol. lxiv., p. 682, I will state here that I never heard a complaint about a feeling of suffocation, never saw a patient who resisted or tried to remove the mask. Cyanosis was observed in but one case, and was caused in this instance by an extreme Trendelenburg position. There never was any irregularity of the pulse. A stage of great excitement occurred in only five cases. Vomiting obtained in twenty per cent. of all the patients; this estimate includes, however, dispensary cases, which, of course, were not especially prepared for anesthesia, and those patients who vomited at the first attempt to ingest liquids or solids. Three patients, each of whom had twice become asphyxiated under ordinary chloroform narcosis, stood the new anesthesia splendidly. In twelve instances a weak, irregular pulse improved during the narcosis. In three cases, where anesthesia was started with chloroform alone, patients became cyanotic, respiration stridulous and stertorous. On the addition of oxygen the respiration became freer, and the patient's face assumed a reddish tint.

The following observations show the time which elapsed before the patients awoke from the anesthesia: One hundred and sixty-six patients were fully conscious immediately after operation; thirteen required between eight and thirty minutes; one woman, after the use of fifty-five grams of chloroform, slept three hours; twenty-one dispensary patients got off the table and walked home. Kidney irritation was never observed.

I became convinced that the administration of an overdose of chloroform is impossible, even if the U-shaped tube became filled with chloroform. The possibility of an exact regulation of the chloroform afflux, the mixture of chloroform with oxygen, the necessary utilization of all chloroform vapor for the anesthesia itself, enable the anesthetizer to reduce the amount of the chloroform used to a *minimum*. Ten grams of chloroform

were used during an operation of sixty minutes (trepanation of the ulna and resection of the elbow); twenty-nine grams in ninety minutes (echinococcus of the liver); twenty grams in sixty minutes (nephrotomy); nineteen grams in sixty minutes (appendectomy); nine grams in forty-five minutes (gastro-enterostomy).

Regarding the consumption of oxygen and its proportion in the mixture: At a pressure of one-tenth of an atmosphere—which is sufficient for deep inspiration without producing a sense of suffocation—one hundred liters of oxygen, at a pressure of two-tenths atmosphere two hundred liters pass out in one hour. These quantities of oxygen are able to vaporize, as I have proved experimentally, respectively ten or twenty grams of chloroform in an operating room of normal temperature. Thus we have in one liter of the inspired air—namely, mixture of air and oxygen—one-tenth gram chloroform, and after some practice the anesthetizer will find this amount sufficient to keep the patient in deep narcosis. In comparison with the usual consumption of chloroform the amount used is very low. The question has been raised by several authorities whether any excellent results are really due to the use of oxygen, and not rather to the exact dosage of chloroform, and whether the mixture of chloroform with air would not give as good a result. Their views seem to be well supported by physiological experiments made by Lavoisier and Séguin, Regnault and Reiset, and lately by A. Loewy,⁴ which were intended to show that an increase of oxygen in the air does not mean an increased absorption of oxygen by the lungs. A normal healthy individual, whose blood is saturated with oxygen, cannot increase the amount of absorbed oxygen to any noteworthy extent; but the conditions are quite different in an anesthetized individual, who is no longer in a stage of oxygen equilibrium. Max Michaelis showed, however, in a paper read before the Thirty-eighth Congress for Internal Medicine, that these experiments are not wholly applicable even for healthy individuals. He says: "That there is a possibility of an increase of absorbed oxygen in a normal individual could hardly be asserted in a more convincing way than has been done by A. Loewy himself. Although Loewy states in his conclusions that the respiratory quotient is in a large measure independent of the inspired air, and an increase of the oxygen to twice the amount does not influence the absorption of oxygen or the giving off of carbon dioxide, he says at some other place: "*Inspiration of air, rich in oxygen, has a quieting effect. The pulse becomes slower, the breathing rate decreases and the muscles seem to relax.*" And this statement is of the greatest importance for the question in view. If there is a favorable influence of air, rich in oxygen, in a healthy individual, a still better one should be expected in cases in which air, deficient in oxygen, is inspired, and when symptoms of asphyxiation are evident. As I have shown at another place,⁵ it is not the increase of carbon dioxide, but the scarcity of oxygen, which produces dyspnea.

I may be permitted to add just one more argument which shows the

dangerous effect of chloroform and the great advantage of administration of oxygen. It is a well-known fact that the oxygen of the blood is bound to the hemoglobin of the red blood corpuscles, and that this combination is easily dissolved. The oxygen can readily be displaced by carbon oxide or nitrogen. Experiments made by Boettcher⁶ have established the fact that chloroform not only displaces the oxygen in hemoglobin, but entirely destroys the latter; it is even capable of dissolving the stroma of the corpuscles. A sufficient proof that the toxic effect of chloroform is principally produced by a scarcity of oxygen and that the efficacy of the administration of oxygen, which proved so satisfactory in all my narcoses so far, can easily be explained from a physiological standpoint.

Thus I once more wish to call the attention of the profession to this new method of narcosis. I hope that extensive trial will establish the fact that the chloroform-oxygen anesthesia will continue its promise of being a satisfactory narcosis.*

*The translator will shortly be in possession of a Wohlgemuth apparatus, and will take pleasure in reporting his results in this journal.

BIBLIOGRAPHY.

¹ Verhandlungen der Deutsch. Gesellsch. f. Chirg., 1897.

² N. Y. Med. Record, October 14, 1898.

³ Arch. f. Klin. Chirg., 1899.

⁴ Untersuchungen ueber Respiration and Circulation. Hirschwald. Berlin, 1895.

⁵ Arch. f. Klin. Chirg., 1901, vol. lxiv.

⁶ Mentioned in Hermann's Text-Book of Physiology.

A CRITICAL REVIEW OF SOME RECENT LITERATURE ON THE PATHOLOGY OF TABES DORSALIS.†

BY SIDNEY I. SCHWAB, M. D., of St. Louis, Missouri.

The impulse to write a paper with the above title came from the reading of a very interesting and suggestive article by Jules Soury, entitled "Revue Critique—Anatomie et physiologie pathologiques du Tabes," which appeared in the *Archives de Neurologie*, January and February, 1901.

It seemed to me that it might be of some interest to go over the literature which has appeared during the last three years on this subject and see what relation the mass of work bears to the prevailing theories in regard to the problem of pathology involved in tabes dorsalis. In this way it might be possible to see the trend of recent thought and to find out which of the existing theories is strengthened or weakened by recent contributions to the subject. As a result a prediction might be ventured upon as to the probable solution of this puzzling and fascinating problem. That the literature of the past three years has brought neither a solution, nor even an indication in what direction the final solution will lie, is not to be wondered at in view of the complexity of the problem involved. Although the object of this paper, therefore, has not been achieved, yet a brief *resume* of what has been done will be of some interest.

† Read before the St. Louis Medical Science Club, April, 1901.

To a great many the pathology of tabes seems simple enough. It amounts merely to a consideration of a wedge-shaped area of degeneration, known as sclerosis, in the posterior columns of the cord. These columns being sensory in function, the symptoms found in tabes would naturally be of the same order. If an individual holding this idea were given a series of microscopic sections from various levels of a tabetic cord, he would find that his classic idea of the pathological appearances in tabes would be rudely shaken. The areas of degeneration are unlike in different parts of the cord, and in some portions of the field normal areas are always found, and, sad to say, he would very soon discover that pathology refuses to adhere to the geometrical concept of his pathological triangle. After a little while the conclusion would be forced upon him that he is dealing with a very complex problem, a problem which has busied some of the best medical minds the world over.

It is very likely that if a solution of the pathology and pathogenesis of tabes should be discovered, it would carry with it an explanation of some of the most intricate problems which the neurologist and the physiologist are now working upon. Such a solution might be of greater import than this, and might realize the stirring words which Marie put at the head of his "Lecons sur les Maladies de la Moelle:" "Hereux ceux qui croient qu'il est en médecine des questions sur lesquelles la Science est faite et que le Tabes est celles là." (Fortunate are they who believe that there are problems in medicine upon which science rests, and that tabes is one of them.) I have attempted merely to go over the literature from 1898 to the present time, as previous to that Spiller's article in the *International Medical Magazine*, and Redlich's¹ and Philippe's² monographs thoroughly cover the ground. It must be said that the number of articles have not been very large and their average quality not very high, two facts which make the task of the reviewer easier and give him a wider latitude for theoretical discussion. It is unnecessary perhaps to say that I do not propose to analyze every paper which has appeared since 1898, but I have selected some seven or eight for discussion which have seemed to me the most interesting and important. In order to make what follows clear to you, a short description of the posterior columns of the cord and the anatomical elements involved in the question will be given.

The sensory system of the cord must be thought of as of two kinds, an endogenous and an exogenous, the former having its cells of origin within the cord, the latter outside the cord in the cells of the posterior root ganglion. The exogenous system is the most important in tabes. Each fiber has its origin in a cell of the posterior root ganglion. This cell is unipolar in type, though embryologically bipolar. Arising from this cell is an axis cylinder which divides into two branches, the so-called T-branching. One of these branches, after becoming myelinized, follows the spinal nerve as a mixed nerve and goes to the periphery; the other goes toward the cord, forming a fiber of the posterior nerve root. It reaches

the cord at the posterior-lateral sulcus and enters it there, forming an entering zone or Lissauer's marginal zone. The fibers of the posterior root are of two kinds, the terminations of which within the cord are entirely different.³ The external root, composed of fine fibers, bifurcates into an ascending and descending branch soon after entering the cord, and after a short course ends in arborizations about the cells of the posterior horns. The internal group, composed of thicker calibered fibers, forms the internal third of Lissauer's zone and divides likewise into a short descending branch and a longer ascending branch. This longer branch is composed of long, short, and medium fibers, the longer ones going straight up the cord, where they end by arborizations in the nucleus of Gall or Burdach in the medulla. The long fibers show a constant tendency to approach the middle part of the cord, giving place to or crowded, as it were, by the constantly increasing number of entering fibers. It follows then that as we approach the cervical part of the cord, the column of Gall is practically composed of the long axis cylinders of the neurones originating much lower down. The ganglion cell, the peripheral branch, the posterior root fiber, its intramedullary continuation and its end-brush is called the centripetal sensory protoneurone. The endogenous fibers are derived from the Clark cells and the cells of the posterior horns; they are of both an ascending and descending type and occupy the topographical position seen in the undegenerated portion of a tabetic sclerosis in the early stage of the disease. They play, in all probability, an unimportant role in the pathology of tabes.

There are a number of theories in regard to the pathogenesis of tabes, which have become more or less fixed in the literature. These represent widely different conceptions of the disease, and each of them, at present, has a certain significance. There is scarcely any part of the sensory protoneurone which has not been fixed upon as the origin of the disease, and before going into a discussion of the literature, these various theories will be briefly described. First, the theory of Leyden: the so-called neuritic theory. This theory assumes that the origin of the tabetic process is to be found in the peripheral nerves, as the nerves here are exposed to the greatest amount of possible damage, cold, trauma, etc. The changes in the cord are secondary. Second, the parenchymatous theory: the spinal ganglion is assumed to be the origin of the tabetic process. This theory was formulated by Babinsky in 1890. Marie was its chief supporter. Third, as a further development of Leyden's theory before referred to, is the theory of the posterior root origin of tabes. Dejerine is probably the chiefest advocate of this hypothesis. Fourth, the meningeal theory. Gall was the first advocate of this idea. This theory assumes the presence of a meningitis, involving the posterior nerve roots, compressing them, and thus causes an ascending degeneration of the fibers within the cord. Recently there has been a tendency to regard tabes not as a disease of the cord *per se*, but as a diseased condition of the whole sensory system.

In regard to the general conception of the disease there are two main tendencies to be observed: first, that tabes is a system disease, in Strumpel's sense, and second that it is a segmental disease, progressing from segment to segment of the cord.

In considering the more recent literature on the pathology of tabes, it is clearly evident that the greatest weight has been laid upon the study of the cells in the posterior root ganglion. This is easily understood when it is remembered that the cell itself is the functional center of the sensory protoneurone, and a lesion here would produce, in a theoretical sense at least, the changes, or some of them, which are commonly met with in a tabetic cord. The impulse given to the study of the nerve cell by the Nissl method and its modifications helps also to explain why the nerve cell should be taken as the most favorable point of study for the solution of the problem. Karl Schaffer⁴ gives a short review of the work done on this subject, and bases his observations on Lèhnossek's notable work, "Ueber den Bau des Spinalganglion zelle des Menschen." Three cases were examined by the author, and his conclusions are as follows: In general my examination of the ganglion by Nissl method gave the very surprising result that definite pathological nerve cells were not found to be present. The chromatic substance showed no important alteration. In cases where the posterior roots showed the most complete degeneration, the nerve cells showed their normal forms. Regarding then chromatolysis as an anatomical index of disturbed cell vitality, we are forced to the conclusion that the initial lesion of tabes must be situated outside of the ganglion cells. Marinesco,⁵ in 1895, examined by the Nissl method the spinal ganglion in two cases of tabes associated with dementia paralytica. He found then such slight changes in the nerve cells that he was inclined to regard the matter as unsettled. Subsequently, in addition to these two cases, he examined nine more by means of the latest technique. This series of eleven cases represents the most extensive work, by far, on the study of the ganglion cells in tabes. These are his conclusions: In almost all of the cases I have found slight changes of one kind and another: disintegration of chromotophylic elements, pallor and disappearance of the granules, etc., rarely atrophy of the cells. These lesions are evidently not the sole result of the tabetic process, and I refuse to admit that they are the cause of the degeneration in the posterior columns. I do not mean to deny that the degeneration of the posterior roots can cause some slight modification in the cells of the spinal ganglion, but I think that their modifications are of a different nature from what I have found, and I attribute them rather to the very great vulnerability of the cells themselves toward different morbid influences.

In view of the recognized authority of this author, these findings must be accepted as final, as far as our present means of investigation go, and it must be regretfully admitted that the parenchymatous origin of tabes does not stand the test of careful study. This negative conclusion is

further strengthened by the remarks of P. Marie upon this paper. He spoke as follows: "Several years ago I thought, with others, that the initial lesion of tabes might be localized in the spinal ganglion. At that time this was theoretical conception, and I am forced to recognize that facts have not confirmed this view. In all the autopsies in tabetics which I have made since then I have never found lesions in the spinal ganglion. I have consequently abandoned my early view, and I am in accord with Marenesco. Although I have been forced to give up my first idea, I have unfortunately not been able to replace it by another, and I must confess at present that I am incapable of saying where the primary lesion of tabes is located."

After this there is nothing much to be said on this theory, and in the present state of our knowledge the spinal ganglion must be placed outside of any definite organic pathological influence in tabes. Furthermore it is scarcely necessary to mention a great objection to the cell origin of tabes, an objection that is purely theoretical, it is true; it is this: you may remember that the posterior root ganglia are unipolar, and that the peripheral and posterior root branch are merely divisions of one axis cylinder. It is reasonable to assume that a lesion situated in the cell itself, capable of causing a degeneration of the portion going to the cord, would of necessity cause a like degeneration in the peripheral branch, because the cell is the nutritional center of the whole neurone. While a degeneration of the posterior root fibers is practically always found in tabes, a degeneration of the peripheral branch is seldom found. This fact alone, to say nothing of the opinions before alluded to, forces us to seek elsewhere than in the initial lesion of the tabetic process. Before passing on to a consideration of the next two papers, brief notes only of which are at my disposal, some words concerning the meningitic theory of tabes, and particularly its special application by Nageotte, may be of interest. According to this writer, the posterior root, before its entrance into the spinal ganglion, receives a sheath from the dura and from the pia arachnoid. At this place he found in tabes certain changes which he called transverse interstitial neuritis. This alteration, which he found in the anterior roots as well, consisted of a cell infiltration which involved the dura and arachnoid of the posterior roots. At a late stage a pseudo membrane is formed with a thickening of the meninges. This interstitial neuritis Nageotte announced as a constant finding in tabes and as a cause of the posterior column degeneration. He has contributed to the support of this theory the following:⁶ A case very favorable for study on account of the age of the lesion was examined and confirmed his hypothesis as above stated, and he showed a very exact relation to exist between the parenchymatous lesion of the roots and the interstitial lesions which characterize transverse root neuritis. This very vague account is all that I have been able to obtain in regard to this case, but in a further contribution⁷ there is a rather more extended account of the application

of his theory to the pathogenesis of tabes. This neuritis affects the two roots, the anterior and posterior, in different ways. The posterior degenerates in its extremity and in its collaterals; the anterior, more resistant, does not suffer at all, or very slightly. The localization of this inflammatory lesion upon the root nerve is explained by the disposition of the lymphatic sheath which is directly continuous with the subarachnoid space. From these facts the author concludes that the systematization of tabes results from two absolutely distinct factors, first, from the disposition of the lymphatic apparatus, which permits the morbid agent to attack successfully the roots at a determinate point; second, owing to the pathological peculiarity of the neurones of the posterior roots, they degenerate progressively under the influence of this localized attack, while the anterior roots are either resistant or, having succumbed, show a tendency to repair in spite of the further progress of the disease. In another paper⁸ by this same author, he describes a peculiar variety of meningeal infiltration by means of myelinated fibers coming from the anterior root, which he believes are found more frequently involved in tabes than is commonly supposed.

In this same connection a paper by Chretien and Thomas⁹ is of great interest. It relates to two cases of tabes which were especially characterized by a remarkable and rapid development of muscular atrophy. The post-mortem examination gave a sufficient explanation for this phenomenon. In addition to the sclerosis of the posterior column, changes in the cells of the anterior horns were found in the lumbar-sacral region, and in addition a peripheral neuritis was demonstrated.

From these reports there is to be noted—leaving aside for the moment the correctness of Nageotte's assumption of the existence of a transverse neuritis and the existence of a degeneration in the anterior roots—that a few cases of muscular atrophy in tabes have been puzzling questions to neuro-pathology. This tends toward a wider conception of the pathological process involved, and seems to support some of the more recent theories that tabes is not a disease which is limited to any one system of neurones, but involves the whole of the nervous system. Concerning the more specific hypothesis of Nageotte, the conclusion of Redlich¹⁰ remains true at the present time. Both he and Obersteiner studied several tabetic cords to test this point, and found no satisfactory evidence of its presence; and Redlich believes that the finding of Nageotte cannot explain the tabetic process, but possibly may cause an intensification of the degeneration of the roots.

Quite a different aspect of the question is found in the paper by Roux.¹¹ His work is based upon the study of seven tabetics in Dejerine's clinic. In the cervical, dorsal and splanchnic sympathetic he found that almost half of the smaller myelinated fibers had disappeared, while the large fibers remained intact. The large fibers arise from the ganglion, and as these ganglia are intact in tabes it is natural that the fibers arising

from them should likewise be intact. As a check on this finding the sympathetic systems of ten individuals who had died of various diseases other than tabes were examined, and no changes similar to these were found. It seems a legitimate conclusion, then, that this is a special pathological condition of tabes. Any sort of final judgment in respect to the conclusions of this paper must be reserved until our knowledge of the anatomy and physiology of the sympathetic system is improved.

In regard to the question whether tabes is a disease not limited to the cord, but involving the nervous system as a whole, a question which Nageotte's work would seem to advance, a paper by Epstein¹² is of some significance. The portion of his paper which is interesting in this connection is that which has to do with the *role* of the tangential fibers of the cortex in tabes. As is well known to you, the disappearance of this layer is almost pathognomonic of dementia paralytica, and is found in those cases of tabes which later develop symptoms of this disease. Three brains were studied by Epstein—one from a tabetic, uncomplicated; one of a dementia paralytica with tabes, and one of dementia paralytica alone. In all three an atrophy of the myelinated fibers in the tangential layer was found, which was most pronounced in the dementia, and least of all in the pure tabes. Moreover, the atrophy in the tabes was less regular in distribution and showed more of a tendency to involve the other layers of the cortex than the other two. Colellea¹³ has suggested a very ingenious reason for the psychical disturbances sometimes observed in cases of tabes. He likewise believes that a neuritis of the anterior roots exists without any pathological conditions of the anterior horn cells. He finds a reason for the psychical disturbances which are of the type of ideas of persecution and dementia in the fact that the sensory system, being disturbed in function, brings false impressions to the sensorium from the outer world. This sensory disturbance may be located in the peripheral nerves, the cord, the brain stem, in the parieto-occipital or frontal lobe.

Laspeyres¹⁴ examined the whole nervous system in a case of tabes which was complicated with necrosis of the jaw. In addition to the typical changes in the cord, he found a wide-spread involvement of the pia arachnoid and its blood-vessels. An endarteritis obliterans extended to the medulla. Further, he found both ganglia Gasserei infiltrated with round cells in the interstitial substance. This, according to him, explains the extensive necrosis of the jaw. The trigeminal nuclei in the medulla, as well as in the cord, were normal.

Though these articles by no means exhaust the literature of the pathology of tabes since 1898, yet they appear to me to be the most significant and to bear more upon the problem which has been before us. They present a pretty wide field for thought, and while they cannot be said to settle the question in any sense, yet they would seem to indicate two general lines of progress: First and most important is that the conception of tabes must be made a much broader one than was formerly thought essen-

tial; the second is that no division of the sensory system, if we are to consider this system as the sole one involved in the tabetic process, can be regarded with certainty as of particular importance in the initial location of this process. Now that it is pretty well proven that the cells of the posterior ganglia are not primarily involved in the process, the most logical seat for the initial lesion must, by a process of exclusion, be in the posterior nerve roots. Its location there, anatomically at least, explains more satisfactorily the changes found in the cord, at least in the early stages, than any other hypothesis. The existence of a neuritis there due to a meningeal pressure is certainly not proven, and it must be acknowledged that we are quite unable to say what the nature of the process is. Granting that the process starts here, its progress upwards is best explained by a gradual segmental involvement of the cord, by which is meant that each series of posterior roots is successively attacked, starting from the lumbar region. With the further progress of the disease the endogenous fibers of the cord become involved to a varying extent, explaining the changes found in Clark's column and in the cells of the posterior horns and the fibers arising from them. With this wide-spread distribution of the sensory protoneurons, the rest of the nervous system, including the motor as well (and it must be remembered that the whole nervous system is in intimate connection with it), is functionally affected and responds easily to any process, pathological in nature, which the normal nervous system could easily overcome.

BIBLIOGRAPHY.

- ¹ Die Pathologie der Fabischen Hunterstrangserkrankung, 1897.
- ² Le Tabes Dorsalis, 1897.
- ³ Les affections nerveuses systematiques. J. N. Gerest.
- ⁴ Das Verhalten der Spinal ganglionzelle bei Tabes auf Grund Nissl's Färbung. *Neurologisches Centralblatt*, 1898, No. 1, p. 2.
- ⁵ Recherches sur les lesions des cellules des ganglions spinaux dans le Tabes. Communique par Prof. Joffroy. Societe de Neurologie Paris, December 6, 1900.
- ⁶ Note sur la lesion primitive du Tabes. Soc. de Biologie, April, 7, 1900. *Abs. Revue Neurologique* p. 1095, 1900.
- ⁷ Note sur la Theorie du Tabes. (*Idem*)
- ⁸ Note sur la presence des fibres a myelin dans le pia. mere spinal des Tabes en rapport avec la regeneration des fibres radiculaires anterieures. *Compt. Rendus de la Societe Biologique*, No. 27.
- ⁹ Etude sur une forme speciale du Tabes amyotrophique. *Revue de Medicine*. No. 11, 1898.
- ¹⁰ *Idem*.
- ¹¹ Lesion du Grand Sympathetique dans le Tabes. *Le Semaine Medicale*, No. 44, p. 350, 1899.
- ¹² Ueber den Markfasserschwund in der Grosshirn Rinde bei Tabes und Paralyse. *Monatschrift fuer Psychiatrie*, iv., 4, 1898.
- ¹³ Sulla patogenesi della atrofia muscolari e dei disturbi psichici nella tabe dorsale. *Riforma Medica* ii., 26, 1898.
- ¹⁴ Anatomischer Befunde bei Emeim Falle von Tabes. *Zeitschrift fuer Nervenheilkunde*, Bd. xiv., H. 3-4, 1899.

SOME OBSCURE INJURIES FOLLOWING THE TOXIC USE OF ALCOHOL.

BY T. D. CROTHERS, M. D., of Hartford, Conn.,
Superintendent Walnut Lodge Hospital, Hartford, Connecticut.

There are many serious organic diseases which are traceable to syphilitic infections, to heat and sun-strokes, and also to brain-shocks, concussions or injuries from falls, and blows on the head.

Sometimes the connection between these causes and the serious diseases which follow is very clear and can be traced in a continuous line of symptoms. In other cases it is obscure, with breaks in the history, and yet these causes as the starting-point of many grave diseases which follow cannot be mistaken.

Alcoholic intoxication is the first cause of many equally serious diseases and neuro-psychoses, although this fact is largely unknown and unrecognized by the profession.

The familiarity with intoxication and the delusive theories of moral causation have repelled most efforts to study the pathology and psychology of this form of poisoning; hence the etiology of delirious delusional alcoholics on the streets and in the station-houses are literally more obscure and unknown than the etiology of yellow fever or the plague.

In this new study of the subject I will confine myself to the conditions which are traceable to the first toxic action of alcohol.

This may be divided into two classes:

First.—The direct injuries which follow from alcoholic poisoning.

Second.—The psychoses following this state manifest in the alcoholic craze and inebriety which follows.

As an example of the first form of injury, the following instance is an illustration:

Many years ago I was called to see a physician whose intoxication was so profound as to be alarming. He had attended a supper at a medical society with some friends, and drank several kinds of wine. This was his first intoxication. He had been a total abstainer up to this time, and both the taste and smell of spirits were particularly unpleasant. All his habits of life and living had been regular. He was considered a strong, healthy man, and had never been ill. He recovered the next day and went home. The only change observed was extreme paleness.

Several years later he consulted me and gave the following history: After this first intoxication he became anemic; had attacks of nervous dyspepia; could not eat certain foods. Any overexertion or break in the regularity of his habits of sleeping or eating was followed by extreme exhaustion. Attacks of insomnia and headache followed; and his ordinary practice was a burden, only done with great mental effort.

He was filled with morbid fears of fatal mistakes and loss of reputa-

tion. He had been abroad six months and returned no better. All the physicians he had consulted had diagnosed neurasthenia with possible incipient dementia, and advised change and rest. He was morbidly introspective, and was alarmed at the possibility of oncoming malignant disease of the stomach. He had grown thin and was anemic, and though at times he slept and ate well, yet indigestion and insomnia would follow. Various functional disorders frightened him so seriously that he would go to bed for days at a time, then get up and appear well again, and attend to business with pleasant ease. Later he was obliged to give up surgery for fear of making mistakes, and seemed to have at times doubts of the correctness of his judgment, and gave unusual care and attention to confirm his opinions. This neuro-psychopathic state continued for two years, ending in sudden death from what was called angina pectoris. He asserted that his condition dated from the injury following the first intoxication.

The second example was also a physician of forty years of age, temperate and in vigorous health. He had never been sick, and had taken unusual care of himself. His ancestors were healthy, long-lived people, and there were no hereditary diseases in the family. He passed a rigid examination for a large life insurance a week before he was first intoxicated. Previously he had never used spirits or tobacco, both from principle and from disgust with the odor and taste of these drugs.

He attended a banquet in a neighboring city, and to the surprise of his friends, when urged, drank freely of wine and champagne. He returned to his home in a semi-delirious state, and later became stupid and remained in bed for three days. Then he recovered and went about his usual work. From this time his manner changed. His former cheerfulness merged into silence and reserve. He seldom laughed, and seemed absorbed in some mental study. He complained of insomnia, and seemed very anxious about foods and baths for himself. Six months later he was anemic, and walked as if partially palsied. His sleep and digestion were impaired. He made no complaint, went about as usual, and when asked to explain his condition, treated it lightly as some obscure nerve exhaustion. The next year hypersensitive states appeared. He complained of cold and sudden heat, and began to express fears of sudden death, and thought the condition malarial; took large quantities of quinine and antimalarial drugs. His mental condition changed. He was suspicious and irritable, and talked loudly at times, and at other times would be reserved and seemed afraid to speak. He consulted a number of physicians, who diagnosed brain exhaustion, and advised change and rest. He spent a year traveling and came back worse, and a year later died suddenly of some sudden palsy. A post-mortem revealed nothing that would explain the cause of death.

The third example was that of a clergyman thirty years of age, in charge of a large church. He was a strong, athletic man, temperate, and had never used spirits or tobacco. There was no history of hereditary

disease in his family, and he had never been sick. He was chilled from services at a funeral in a country cemetery, and given a large glass of cider brandy for warmth. This diminished the muscular power of his legs so that he spent the night at a friend's house. For other symptoms hot whisky was given, and he was considered ill for two days before he could return home. From this time he became a nervous invalid. First, nutrition was disturbed. Food disagreed with him. Then insomnia and heart palpitation followed. Influenza, malaria and various forms of neurasthenia were diagnosed. Rheumatism and stiffness of the joints succeeded. Then his mind became feeble, and emotional changes followed, until two years later he resigned his charge, and is now an invalid, unable to walk or bear any strain of mind or body.

The fourth example was that of a mechanic, forty-six years of age. He was a perfectly temperate man, never using spirits or tobacco, living in good surroundings, and was regular in work, eating and sleeping. After a fortunate sale of a patent in a distant city he was persuaded to drink with some friends, and suddenly became intoxicated. He remained in bed twenty-four hours, then returned home and called the family physician, and was supposed to have an acute attack of indigestion. From this time he was an invalid, and appeared to be suffering from some obscure neurosis, with swellings of the joints, and general nervous exhaustion. Five years later he gave up business, and is now going the rounds of sanitariums for relief from paroxysmal pain and nameless functional and organic disorders.

These examples are given as marked types of neuro-psychoses and psychopathies which are traceable and began with the first profound intoxication from spirits.

In these instances an aversion to all use of spirits followed the first intoxication. No spirits were taken before this event, and there was a general impression that intoxication was the first cause of the disorders which followed. There was no hereditary history in these cases, and all the facts pointed to the first poison of alcohol as the active and exciting cause.

In two similar instances occurring recently, where an accidental intoxication was the starting-point of serious and finally fatal neurosis, marked by sclerosis and palsies, there was a history of previous hereditary psychopathies. It was evident that intoxication acted as exciting cause, rousing up a latent tendency to disease which continued to a fatal termination.

The second clinical phase of this subject is the psychosis following the first intoxication, breaking out later in some form of inebriety, which is literally a symptom of the previous degeneration or injury. I have found a number of less prominent examples where neuroses appeared soon after the first toxic poisoning from alcohol that was supposed to be due to influenza. Thus, soon after the first intoxication, symptoms of in-

fluenza came on, and a long, distressing sequelæ of obscure diseases followed, ending fatally.

Malaria, rheumatism and other symptoms of disease seemed to start from this point, although ascribed to other and insignificant causes. The evidence that alcoholic poisoning was the specific cause, was due to the fact that symptoms of functional and organic changes began soon after the intoxication, and also that there were no facts in the previous history which indicated these changes.

I have seen four cases of persons who used wine and beer in great moderation during periods of from two to six years, then suddenly they became profoundly intoxicated; recovered, and were total abstainers ever after.

Dating from a first acute alcoholic poisoning, various and most complex neuroses appeared, and diseases which were obscure and very difficult to diagnose and to treat followed, ending fatally in a short time. The specific cause, alcoholic poisoning, was not recognized, nor the preliminary period of moderate drinking considered as a predisposing factor in the cases.

In my studies of a large number of both alcohol, opium and other inebriates, a certain proportion of instances have a history of one early, profound intoxication, and then, after years of abstinence, they merged into a continuous addiction to spirits or some narcotic drugs. An interval of years may have passed from the time of the first intoxication, during which they were total abstainers, and in some instances promoters of the cause of temperance. Then suddenly, without apparent cause, they became addicted to the use of spirits and drugs. The mental symptoms in such instances are often so prominent as to suggest a long preliminary state of degenerative changes dating from the first intoxication.

The remark of friends and near associates that such persons were always queer and peculiar in their thoughts and habits is a confirmation of the expectation that neurotic changes had been going on long before the break-down.

The following is an example under my care: A young man of good health and family history became profoundly intoxicated on his graduation from a law school. For ten years he was a hard-working, temperate man, and although successful, was eccentric. He would suddenly stop business, go to bed and abstain from food for two or more days, claiming to be exhausted and threatened with congestion of the brain. The family physician considered it largely hysteria, and could find no tangible cause. Both in his business and in regard to himself he was erratic and changeable in his plans, and spent much time reading books of health. Suddenly he began to use spirits daily, and soon became an inebriate. There was doubtless a connection between the first intoxication and the inebriety years after. This was evident in the neurotic symptoms and changes during this period.

Persons who become neurotics in the best conditions and surroundings of life and then unexpectedly drink or take drugs to great excess are often found to have a history of some early profound intoxication with slow recovery. These instances are unrecognized, but can be traced in many cases; and the connection between the first intoxication and the later stages can be established without much doubt.

A leading business man became intoxicated at a wedding for the first time in his life, never having used spirits before. He was sick for a week, then recovered. From this time he was conscious of increased nervousness, loss of power of attention, was fearful, and worried about matters which previously gave him no concern. He described his symptoms by the phrase that "he had lost his nerve" and could not control himself as in former times. He complained of weakness and a disinclination to either think or act, and said it all dated from the intoxication at the wedding. This increased until a year later hemiplegia appeared. Two years afterward he died of some acute disease. The interval between the first toxic poisoning was marked by distinct symptoms of both mental and physical changes and fatal break-down which have not received any study so far.

Many persons become intoxicated at long, irregular intervals, depending on some unknown causes; and while there are no pronounced symptoms of neuro-psychical disease which attract attention, there are often symptoms of debility and weakness which are overlooked. Such persons suffer from organic and functional disorders and acute diseases that are ascribed to other causes. Neuritis and obscure forms of so-called rheumatisms are common. An instance occurred recently of a physician who was seized with what was called an attack of rheumatism, and after a few hours of acute pain died. It appeared that for the past five years he had been intoxicated at least six times, and on each occasion suffered from severe pains in the legs and severe heart depression. The last intoxication was four days before death, and he was out as usual attending to business the day after drinking. No doubt there was some connection between the alcoholic poisoning and the death which was not recognized.

It may be stated as a fact that every intoxication from alcohol is both a physical and psychical concussion to the brain centers and the beginning of both organic and functional changes which may go on rapidly or slowly. Frequent intoxications develop imbecility and masked dementiæ. This is seen from any careful study of chronic inebriates. The resisting power of the brain to continue intoxication varies widely, yet it is evident that after certain changes have taken place the action of spirits may seem less acute and prominent, but the degeneration is continuous. Like repeated blows on the head, the effects are cumulative, and finally merge into well-marked organic neurosis.

The phenomena of intoxication from alcohol are familiar, and yet their physiological and pathological significance is largely unknown. An outline

view will be of interest. The first glass of spirits produces a sudden flushing or blanching of the vaso-motor circulaion of the blood to the face. The facial muscles are first agitated; then become fixed and have a stolid, palsied appearance. Or they may twitch and quiver for a time, then settle down into a stolid, fixed state. The lips seem more firmly compressed; and when used rapidly, have a spasmodic movement. The eye appears bright and glittering; then becomes suffused with tears, and rolls about in an unusual way or settles into a fixed, palsied look. The voice is altered. Words come hurriedly or slowly, or very smoothly glide into each other, both with or without an effort. Respiration is quickened, and a sense of shivering and agitation pervades the body. Brain activity is suddenly increased, rapidly merging into confusional states, with difficulty of utterance. When more spirits are taken all these symptoms deepen. The first shock from a sudden interruption of the normal rhythmical flow of nerve energy passes away and a delusional period follows. This is anesthesia, with buoyancy, comfort and rest. The first action is that of shock and profound alteration of the functional activities of the brain. Later the special senses become impaired. Sight is diminished. Hearing is dulled. Feeling, taste and smell are lowered. There is a fall in temperature. Muscular power is enfeebled. Memory is weakened. Rapidity of thought and power of concentration, with conception and perception and judgment, are all more or less paralyzed. Stupor and unconsciousness follow. Before this later stage a period of exaltation and delusional confidence in ability to think and act more wisely and clearly is nearly always felt. There is in all forms of intoxication first a shock and concussion to the brain and nerve centers. Second, a period of anesthesia of the higher and sense centers, with delusional exaltations and boldness of mind. Third, these all finally merge into stupor, palsy, and unconsciousness..

The so-called stimulation is irritation and paralysis.

Psychological measurements of the brain and sense functions as well as the organic functions at their early period show palsy. Yet the theory of stimulation is accepted as a true explanation. Each intoxication is a profound sudden paralysis of the brain and nerve function.

A concussion from chemical agents acting in some unknown way, raising the heart's action, then lowering it, acts with especial severity on the higher brain centers.

The feeling of comfort, exaltation and superior vigor are delusions. The theory that the action of spirits will give new power and force in an emergency is an error. It brings recklessness and loss of judgment with failure of the finer conceptions of the relations of things, but nothing more.

When alcohol is used to the state of intoxication it is always followed by symptoms which show in some degree the injury which has been done. The common sequelæ of intoxication are headache and exaggerated sensations of head and stomach, with extreme debility; these are significant signs of injury. The acuteness of these symptoms calls for more spirits,

and finally the suffering subsides because the higher sense centers are blunted and anesthetized and fail to register the pain impressions.

From our present knowledge of the action of alcohol on the brain and nervous centers, we are sure that recovery from its toxic effects is slow, and in some cases almost impossible. The damage may be covered up and not be clear except from a minute study of the symptoms, and yet it exists.

Intoxication soon after or near the age of puberty has been the starting-point of very serious neuroses which continued years after, often breaking out in some neurosis or form of inebriety.

Profound intoxication at from forty-five to fifty is very serious in the entailments which not unfrequently follow from it.

Some of the facts which I wish to make prominent are these:

First.—Intoxication from alcohol to the extent of coma, with profound relaxation of all the functional activities of the body, is often a serious injury to the brain and nerve centers, and is followed by neuroses and organic change.

Second.—The significance of alcholic intoxication in the study of obscure diseases cannot be overstated. It may be both an active and an exciting cause, and should always be considered in neuro-psychopathies or other disorders that follow.

Third.—Intoxication at puberty and in middle life is often the starting-point of a circle of disease which is usually ascribed to other causes.

Fourth.—Intoxication always predisposes to the diseases of inebriety from alcohol or opium, which may come on suddenly at any time in after life.

Fifth.—Poisoning from alcohol is far more serious than supposed, both in its effects and the neuroses which follow.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF JESSE S. MYER, M. D.

The Combating of Tuberculosis in the Light of the Experience that has been Gained in the Successful Combating of Other Diseases.—(Professor Dr. Robert Koch, Berlin, *Deutsche Medicinische Wochenschrift*, No. 33, 1901.)—But a short time ago tuberculosis was regarded as the consequence of "social misery." Now it is known to be the result of the ravages of a parasite which we may pursue and annihilate. Such a conflict requires the co-operation of all medical men, the state, and the whole population. As an example of what may be accomplished through proper hygienic and prophylactic measures, the author points to the results of such in the cases of bubonic plague, cholera, hydrophobia, and leprosy. In combating pestilence, the root of the evil must be struck, and no force squandered in subordinate, ineffective measures. The various modes of infection are discussed. Hereditary tuberculosis has been proven to be exceedingly rare. The transmission of the disease from animal to man has been heretofore accepted as proven, and most rigorous measures have been taken against it. The author's investigations have led him to form an opinion differing from that generally accepted. He expresses himself as having been dubious throughout with reference to the transmission of the disease from animal to man, and the experiments upon smaller animals were not convincing. The opportunity to experiment upon cattle enabled him to arrive at absolutely conclusive results.

A number of young cattle, nineteen of them, after standing the tuberculin test, were subjected for eight months to every possible means of infection with the bacilli of human tuberculosis. Some were fed on tuberculous sputum, others received intravenous injections of the pure culture, others intraperitoneal injections, some were permitted to inhale them, etc. The post-mortems on these animals showed nothing but small foci at the point of injection, absolutely no other signs of tuberculosis.

The result was quite different when cattle were infected through the same means with the bacilli obtained from the lungs of others affected with bovine tuberculosis. "In short, the cattle proved just as susceptible to infection by the bacillus of bovine tuberculosis as they had proved insusceptible to infection by the bacillus of human tuberculosis."

The same results were obtained from experiments upon swine: those that were fed upon sputum flourished, while those fed upon bacilli of bovine tuberculosis were stunted in their growth and died. Asses, sheep and goats gave like results. From this the author concludes: "Consider-

ing all these facts, I feel justified in maintaining that human tuberculosis differs from bovine and cannot be transmitted to cattle."

Inasmuch as the experimental investigation upon human beings is out of the question, the converse cannot be absolutely demonstrated. He endeavors to approach this indirectly. Milk and butter dispensed in large cities frequently contain tubercle bacilli in large numbers. If these bacilli could infect human beings, many cases of primary tuberculosis of the intestines would occur; especially among children. Statistics speak against this. The author has seen primary tuberculosis of the intestines but twice; but ten cases have been met with in the Charite Hospital in five years; in 3104 cases of tuberculous children, Biedert saw sixteen cases, etc. It is quite probable even in these cases that the infection occurred through the ingestion of the bacilli of human tuberculosis. This can be proven now by the injection of bacilli obtained from one of these cases into the cow. If she develops tuberculosis, we could assume that the infection of the intestines had occurred originally through the bacillus of bovine tuberculosis. He makes the statement: "I should estimate the extent of infection by the milk and flesh of tuberculous cattle and the butter made of their milk as hardly greater than that of hereditary transmission, and *I therefore do not deem it advisable to take any measures against it.* So the only main source of infection of tuberculosis is the sputum of consumptive patients, and the measures for the combating of tuberculosis must aim at the prevention of the dangers arising from its diffusion." The various methods to be employed in combating this dreaded disease are discussed in detail.

Concerning Human and Bovine Tuberculosis. — (Rudolf Virchow, Berlin, *Berliner Klinische Wochenschrift*, No. 31, 1901.) — Virchow states that he is one of the number appointed by the government to investigate further the recent observations relative to tuberculosis. This commission has looked well into the subject in hand, and has set forth further points to be considered in this connection. The specimens prepared by Koch in his series of investigations were presented to the commission, but he (Virchow) considered them inadequate to enable him to form a definite opinion. He thinks Koch goes too far in the expression that human tuberculosis is probably not transmitted from animals through the medium of milk, butter, etc. He has seen a number of cases at the Charite, in which the post-mortem revealed rather convincing proof. He says: "I think it possible that the negation of Koch will in all probability be disproven in the near future." He has long thought that bovine and human tuberculosis were not indetical, and is not surprised that Koch has at last arrived at the same conclusion.

A condition cannot be considered tuberculosis without the existence of tubercles in the pathologico-anatomical sense. A tubercle is a lesion, containing not only tubercle bacilli, but also cells having their origin from

pre-existing cells in the body. Since he is one of the number appointed to conduct further investigations on this subject, he will keep these points in mind, and endeavor thereby to avoid misconceptions in the future. He would be greatly pleased if they should reach the conclusion that tuberculosis is rarely if ever transmitted to man through milk and meat. He has long since been of the opinion that this point has been greatly overestimated.

Concerning the Relationship Between Bovine and Human Tuberculosis.

—(Prof. Dr. P. Baumgarten, Tübingen, *Berliner Klinische Wochenschrift*, No. 35, 1901.)—The identity of the bacilli of human and bovine tuberculosis was thought to have been definitely and conclusively proven with the demonstration that morphologically and in their action upon small animals they are identical. The author has long thought, however, that a very important link in this chain of proof was missing. In 1893 he conducted experiments on two calves, quite similar to those recently conducted by Koch, and arrived at the same results. The one calf developed general miliary tuberculosis after inoculation with the bacilli of bovine tuberculosis, while the other, inoculated with those of human tuberculosis, showed no evidence of the disease, excepting a small focus containing bacilli at the point of injection.

The author is in possession of some interesting facts concerning the transmissibility of the disease from animal to man. He had an opportunity to make the post-mortems upon a number of individuals who had been inoculated with tubercle bacilli. Rokitansky had given expression to the theory that tuberculosis and cancer did not occur simultaneously in the same organism. Some twenty years ago a physician, prompted by the best of motives, followed out this train of thought, and endeavored, through the subcutaneous injection of tubercle bacilli, to cure otherwise incurable malignant tumors. He carried out these investigations upon six individuals doomed to death from inoperable carcinomata, hoping to relieve them empirically, as sarcomata are sometimes cured through erysipelas. The results were entirely negative. Neither good nor harm resulted from the experiment. The bacilli used in the subcutaneous injections were those of bovine tuberculosis, others not being accessible at the time. In spite of the fact that these injections were repeated a number of times in each case, the post-mortem failed to reveal the least evidence of tuberculosis, except at the point of injection, where there were small scars, containing no tubercle bacilli. The lymph nodes in close proximity to the scars were in no way involved.

While the author leans toward Koch's recently exploited theory, he urges the importance of continuing the study of the relationship of these diseases. He points out the possibility of the bacilli of bovine and human tuberculosis differing only in point of virulency; that they may differ only by virtue of the difference in their environments.

The Spread of Tuberculosis by Coughing.—(L. N. Boston, Philadelphia, *J. A. M. A.*, September 14, 1901.)—Boston devised a mask by means of which microscopic slides could be held indefinitely in front of the mouth and nose of tubercular patients. He was thus enabled to determine whether or not consumptives emitted a fine spray, containing tubercle bacilli, when talking, laughing, clearing the throat, etc. This test was applied to fifty patients, who were requested not to encourage coughing or other violent explosions. Some slides contained many droplets, varying from the size of a pin-point to that of a pin's head; some contained but few, while others presented an evenly spread film. In all but one case bacteria were found, and in thirty-eight of them tubercle bacilli varying from four on a slide to large clusters too numerous to count. The spray could be influenced through whispering, loud talking, clearing the throat, coughing, etc. It is quite evident that tuberculosis, diphtheria tonsillitis, etc., can be disseminated in this manner. The author suggests the possibility of surgeons and assistants suffering from acute or chronic diseases of the mouth, nose, etc., infecting wounds, and suggests a mesh of gauze for the exclusion of this danger.

The Inhalation of Formic Aldehyde as an Aid in the Open-Air Treatment of Pulmonary Tuberculosis.—(Dr. Crowry Muther, St. Lawrence, I. W., *Philadelphia Medical Journal*, August 31, 1901.)—This writer discusses the merits of formic aldehyde as a general antiseptic and disinfectant. Its application in the treatment of pulmonary tuberculosis has given very gratifying results. In a former report of seven cases treated, three were cured, two were benefited, and two were non-conclusive.

Two methods are employed: the dry method, in which paraform tabloids are used, and the moist method, in which formalin vapor inhalations are employed. Fifteen cases are here reported, five of which were completely cured, seven almost cured, one slightly benefited, and two unaffected. Systematic and persistent use of the treatment has given, in his hands, very satisfactory results.

Acute Splenic Miliary Tuberculosis.—(Dr. D. Stewart, *A. J. of the M. S.*, September, 1901.)—Stewart reports a case of miliary tuberculosis evidently primary in the spleen. Upon admission the patient presented symptoms which the attending physician had interpreted as typhoid fever. Marked enlargement of the spleen was in the beginning the only physical finding. The lungs and other organs were apparently normal. Gradually symptoms of general miliary tuberculosis developed, and the patient died within two months. The lungs, kidneys, liver, etc., upon post-mortem, revealed a few miliary tubercles, while the spleen, four times its natural size, was found to be one mass of tubercles, half of which had advanced to complete caseation. This was found nowhere outside of the spleen. Those in the lungs were recent and minute, and there were no indications

of consolidation. The process in the spleen was so extraordinarily out of proportion to that encountered elsewhere that the author had no hesitancy in considering it primary in this organ.

The Zoological Distribution of Tuberculosis.—(Woods Hutchinson, *Medical Record*, August 24, 1901.)—Hutchinson reports his observations upon animals during a period of six months in the London Zoological Gardens. Autopsies were made on one hundred and ninety-one animals and birds. Sixty per cent. were on mammals and forty per cent. on birds.

The proportion of tubercle was almost exactly the same in both. Of the entire number 24.6 per cent. died of tuberculosis. The relative value of race, food and housing as predisposing factors are briefly discussed in the light of the death records of the gardens for the past five years.

Pulmonary Tuberculosis as an Insurance Problem.—(Greene, St. Paul, Minnesota, *Am. Med.*, August 31, 1901.)—Greene urges a more general recourse to simple, thorough and scientific methods in examination for life insurance, with a view to reducing the mortality, protecting sound policy-holders, and directing attention to early and curable diseases. He refers to the statistics of a very reliable company, 12 per cent. of whose mortality in fifty-five years was attributed to tuberculosis; 32 per cent. of all those dying between twenty-five and thirty years of age died of tuberculosis. Of the former group, 18 per cent. died during the first two years of insurance, 53 per cent. during the first five years, etc.

He describes methods of examination by which such figures may be prevented, and shows how an expenditure of five or ten minutes more by those trained in the matter of physical examinations would exclude such possibilities.

The Relation of Alcoholism to Tuberculosis.—(T. N. Kelynack, *London Lancet*, August 3, 1901.)—The relationship of alcoholism to tuberculosis has been a mooted question for many years. The results arrived at by those studying the question have been diametrically opposite. It is maintained by some that alcoholism is antagonistic to tuberculosis, by others that alcoholism bears no special relationship to tuberculosis, by others, still, that alcoholism definitely predisposes to tuberculosis. Pathological data affords the most reliable basis for the formation of sound views on the subject. The author gives the results of his observation in a number of autopsies. During a period of three years he met with ten cases of peripheral neuritis in chronic alcoholics, eight of which presented tuberculosis of the lungs in various stages. Tuberculosis is also of frequent occurrence in the subjects of alcoholic cirrhosis of the liver. In a series of over one hundred post-mortems twenty-five per cent. presented evidence of tuberculosis; active phthisis was present in fourteen cases,

and active peritoneal tuberculosis in twelve cases. Ten per cent. of these patients appeared to die directly from tuberculosis.

Legislation Suggested for Controlling and Eradicating Tuberculosis in Animals.—(Prof. Duncan McEachran, *Lancet*, August 3, 1901.)—The author, in pointing out the great losses sustained by stock-raisers from tuberculosis in cattle, and the danger which threatens the community at large as a result of it, urges strict legislation for the eradication of the disease. The efficiency of the tuberculin test as a diagnostic aid is gone into, and is recognized by the author as a safe and reliable test by which even latent cases can be diagnosed. The precautions thus far taken by various states are here compared. Tuberculosis should be included in the list of contagious diseases. All foreign animals should be subjected to the tuberculin test. The use of tuberculin should be limited to qualified veterinarians. All reacting animals ought to be reported and quarantined. Those showing clinical symptoms should be killed at once. Testing of herds should be borne by the state. A reaction of two degrees indicates tuberculosis. Disinfection of the premises should be superintended by government officials.

SURGERY.

IN CHARGE OF WILLARD BARTLETT, M. D.

Benign Gas-Phlegmon of the Right Lower Extremity.—(Thevenot, *Gazette des Hopitaux*, No. 90, 1901.)—Thevenot remarks that wound infections attended with the formation of gas in the tissues had up to the time of his paper been regarded as uniformly fatal; especially those attended by the presence of Pasteur's "Vibron septic." But now, in view of the author's recent experience, this idea is no longer tenable. The case reported is that of a young man whose foot was crushed by a wagon; twenty-four hours later gangrene began, attended by the production of gas which infiltrated the tissues in the course of the long saphænus vein as far as the latter extended. The patient refused amputation, so the author had to content himself with incisions wherever distention was marked. To his surprise the man made a complete recovery, with the loss of only the gangrenous part of his foot—the crushed part, of course. The "Vibron septic" was found in the wounds, and two monkeys inoculated with wound excreta died in twelve hours.

Some Surgical Lessons from the Campaign in South Africa.—(Thomson, *The Lancet*, No. 4066.)—The writer is authority for the statement that 14.8 of all who were hit in the war died. The article is divided into chapters, each treating of a different subject, and the whole containing

a vast amount of information. A mortality of only 10.8 per cent. characterized the treatment of all compound fractures of the femur; a result certainly due in part to the fact that there was no promiscuous probing and examining the wounds. As regards the important matter of abdominal wounds, Thomson is forced to conclude that the soldier has a better chance for his life without a laparotomy than with the same, when conditions in a field hospital are taken into account. (What finer commentary could be offered on the field hospital?) As a rule lodged bullets are not to be removed unless they produce symptoms; and especial emphasis is laid on the fact the soldier's fate rests in the hands of him who applies the first dressing.

Tendon Transplantation.—(Cone, *Johns Hopkins Hospital Bulletin*, August, 1901.)—Cone says that the condition of the muscles cannot be told till the first incision; that a healthy example is dark-red, a paretic rose-red, while complete paralysis induces a yellow color. The quilted suture is preferred, and the second dressing is to be made on the ninth day. As to nerve control after transplantation, Cone thinks that a change in the peripheral arrangement induces a change in the brain centers, the nerves themselves being merely indifferent carriers of impulses. Re-education of muscles takes place more rapidly in youth, hence the better results obtained at this time of life. Absolutely remarkable results have been obtained by tendon transplantation after paralysis of certain groups of muscles in consequence of the most varying causes.

The Segment Diagnosis of Tumors of the Spinal Cord, with Report of a Case Healed by Operation.—(Fedor Krause, *Berliner Klinische Wochenschrift*, Nos. 20, 21 and 22 of 1901.)—Krause is, of all the German surgeons, the one to whom most credit is due for our knowledge of the surgery of the nervous system, especially that which concerns tri-facial neuralgia. Consequently the article in question, dealing as it does with an unusual subject, necessarily awakens an unusual interest. He relates that the operative results have greatly improved in late years, due in part to improved surgical technique, but even more to the fact that we now strive to locate more exactly the *segment* under which the tumor lies. This is not always possible, however, and the greater the mistake, the more segments have to be removed—a matter of no little consequence. The author describes an interesting case in which the exact segmental diagnosis was made and operation performed; the diagnostic details cannot be reproduced here, although the method of making the diagnosis would repay any one for the reading of the original. The tumor was found exactly where expected, and proved to be 17x15x11.5 mm. in size. As a result the patient experienced an almost complete relief of all the symptoms which had persisted for about three years. Two other similar cases are also reported, one of which was operated upon with fatal result.

The Abdomino-Sacral and Other Methods for the Extirpation of Rectal Cancer.—(Sommer, *Medical Times*, No. 8, 1901.)—Sommer presents an article which is valuable because it gives in all its details the technique of the abdomino-sacral operation, and because it affords at the same time a critical comparison between the results of the various methods. He says the vaginal method of Rhen is only to be considered in cases where the tumor lies very low, and even then that the diseased lymph nodes cannot be removed with any degree of certainty. As to the value of a radical operation, it is claimed that Kocher has cases in which no recurrence is manifest fourteen and sixteen years after operation; certainly enough to convince the most skeptical. The French school teaches that the surgeon should satisfy himself with an iliac colostomy after extirpation of the tumor; our author speaks in no unmeasured terms against such a conclusion, and it would seem that most authorities agree with him. Three points are claimed for the combined or abdomino-sacral method, viz.: the danger of infection is much lessened, hæmorrhage can be better controlled, and a more radical operation, as far as the lymphatics are concerned, can be performed.

Blood Examinations as an Aid to Surgical Diagnosis.—(Bloodgood, *Maryland Medical Journal*, September, 1901.)—A number of interesting points in connection with this more modern development of our surgical science are mentioned by Bloodgood. For example, a general anæsthetic is contra-indicated when the patient's hæmoglobin is below fifty per cent., a fact well worth knowing. A sudden rise in leucocytes after an abdominal operation is of greatest value in determining an obstruction, in which event the number goes above 20,000 as a rule; in fact, a positive diagnosis can be made thus before clinical symptoms could possibly guarantee the same. The blood count is of great value in appendicitis as indicating the amount of inflammatory involvement in and around the little organ. Indeed, it cannot be underestimated when one considers three cases of gangrenous appendicitis related by the author. In them the leucocyte count varied from 35,000 to 23,000; but without this none of them would have been operated, so slight were the clinical symptoms. Of course all must have ended fatally without the surgical procedure, which, as it turned out, saved them. In general it may be said that in peritonitis the leucocytes decrease in number after a preliminary rise; and, furthermore, this may be taken as a grave prognostic indication. Where the count is above 18,000 in the first forty-eight hours of an acute abdominal attack Bloodgood would operate, no matter what the clinical symptoms. From the standpoint of prognosis, it may be said that a high count is favorable and a low one unfavorable to operative success.

THERAPEUTICS.

IN CHARGE OF WALTER BAUMGARTEN, M. D.

Ovarian Organotherapy.—(Van Krusen, *Johns Hopkins Hospital Bulletin*, July, 1901.)—For the past three years Van Krusen has employed ovarian extract in capsules, in doses of five grains, in selected cases in dispensary and private practice, grouping them into three classes: “(1) Those suffering from amenorrhœa, dysmenorrhea, and other forms of pelvic diseases; (2) those suffering from symptoms following the removal of the uterine appendages, for the relief of the vaso-motor changes . . . which, with indescribable depression, are so often produced by the premature menopause; (3) the disturbances associated with the natural menopause.” His experience leads him to the following conclusions: “Based upon the use of the American product upon American women: (1) The employment of ovarian extract is practically harmless, as no untoward effects beyond slight nausea have been noted, even when full doses have been administered. (2) In the treatment of amenorrhœa and dysmenorrhœa no good results were secured. (Although in some cases of amenorrhœa of obesity, remarkable results have been obtained by the use of thyroid extract.) (3) The best results were seen in the second class of cases, for the relief of the symptoms of artificial menopause, when, in a few instances, the congestive and nervous symptoms were apparently ameliorated. (4) No appreciable result was noticed in the use of ovarine in the natural menopause. (5) No definite or exact reliance can be placed upon the drug, as it often proves absolutely valueless where most positively indicated. (6) It is extremely problematic whether, in those cases in which relief was noted, the effect was not due to mental suggestion rather than to any physiologic action of the drug. The neurotic type of individual demanding this treatment will often be relieved by any simple remedy. (7) In those instances in which effects were noted, increase in dosage seemed to have little influence in maintaining the effect or preventing the patient from becoming accustomed to its use. (8) In conclusion, the theory which suggests the use of this extract seems to be at fault, and the administration of ovarine or ovarian extract is based upon a wrong assumption as to the function of the ovary. In organotherapy the best results have been obtained from the use of the thyroid and adrenal glands, and the ovary in function is in no sense analogous to these organs. Its principal function is ovulation, and if any peculiar product is coincidentally manufactured, the isolation of this product has not yet been accomplished.”

Treatment of Carcinomatous Growths by Roentgen Rays.—George G. Hopkins (*Philadelphia Medical Journal*, September 7, 1901) has employed X-rays with marked success in cancer of the breast and the axillary

glands involved. He finds that with their use the tumor-mass decreases in size, its consistence becomes softer, subjective symptoms improve, ulcerations heal and offensive discharges lose their disagreeable odor. The treatment is based upon the assumption that "carcinomatous tissue is composed largely of embryonic cells whose molecules are unstable and can be easily destroyed or made to take on a new arrangement"—a healthy one.

A static electrical machine operated by an electric motor is utilized as the source of power in preference to an alternating current. A *soft* X-ray tube with its longer wave is suggested, on account of a greater destructive action on the tissues than the harder tube. The surrounding healthy parts of the body are protected against the action of the rays by several layers of lead foil glued to pasteboard or a flexible material. The duration of the exposure of the tumor is controlled by the effect upon the consistence of the mass, the usual time when daily treatment is given being from five to ten minutes; when the interval is longer, from ten to eighteen minutes. Emphasis is laid upon the point that the distance of the tube from the exposed surface should be ample—in daily treatment at least thirty inches. The errors to be avoided are: too long exposure, too short a distance between the tube and the patient, and improper apparatus.

Treatment of Certain Forms of Cancer by the X-ray.—Williams (*Jour. Amer. Med. Ass'n.*, September 14, 1901) divides cancers, from the standpoint of X-ray treatment, into internal and external forms, of which he discusses only the latter class in regard to the therapeutic effect of the X-ray. This class includes epidermoid cancers, typical epitheliomas and rodent ulcers, "and also cases which had the clinical appearance of beginning cancers, but which under the microscope were found to be plasmoma, or simple cases of ulceration and necrosis," . . . situated particularly about the face and hands. They are the forms that have been amenable, in a measure, to other therapeutic proceedings, but the present method has the advantage of painlessness, harmlessness, and that it yields good cosmetic effects. Great care is to be taken to prevent X-ray burns. The advantages of this new method are: "The treatment causes no pain; healing is produced without creating a burn; some cases improve after a few sittings without further renewal of treatment; the treatment can be carried on without interfering with the work of the patient."

Artificial Respiration in Bronchitis in Children.—(Hermann, *Therap. Monatshft.*, August, 1901.)—Hermann suggests the use of artificial respiration in cases of severe bronchitis in children, and cites the case in which he was first led to employ it; he tided the patient over a critical period, when respiration had risen to 80, and pulse to 160, by following up the child's expiratory movements with moderate pressure upon the false ribs, and later by instituting Schultze's method of artificial respiration in the newborn.

He now employs this method in bronchitis and broncho-pneumonia, as soon as threatening symptoms appear, and teaches the patient's attendants to perform it for half hour at a time at stated intervals, much as he prescribe baths. Pressure on the false ribs is made synchronously with expiration, in order to aid the weakened expiratory muscles, and to effect a more complete expiration, which will make possible a deeper inspiration, and consequently a greater oxygenation of the blood. Expiration is facilitated, respirations become deeper and less frequent, and the pulse less rapid.

Oxygen and Steam with the Vapors of a Special Inhalation Mixture in Pulmonary Diseases.—Penrose (*Johns Hopkins Hosp. Bull.*, November, 1900) advocates the use in catarrhal affections of the nose, pharynx, larynx, in grip, chronic bronchitis and pulmonary tuberculosis with secondary infection, of steam or oxygen, or both, which has been passed through a mixture of creosote, turpentine and compound tincture of benzoin in a pint of boiling water. He details a case of tuberculosis with beginning cavity formation in which the sputum decreased rapidly and pus organisms disappeared entirely within a few weeks. Patient gained weight, and the tubercle bacilli disappeared after three months of the inhalation treatment; another case, one of purulent bronchitis, in which the sputum and the pus organisms rapidly disappeared and the cough ceased; finally a case of chronic infantile purulent bronchitis, which yielded rapidly, and permitted a rapid development of the child.

The method may be applied by passing oxygen or steam through the mixture, utilizing a "Benzoinal Inhaler" or "Hynson and Westcott Inhaler," or, more simply and less expensively, especially for home use, by inhaling the fumes as they rise from the boiling water. To be effective, inhalations should be of ten to fifteen minutes' duration, and taken systematically three or four times a day. To begin with the following formula is used:

R	Creosote (Beechwood).....	
	Olei terebinthinae.....	aa ʒ iv
	Tr. benzoini co.....	ʒ iij
M.	Sig.—Dram of this mixture to a pint of boiling water.	

A greater proportion of creosote and oil of turpentine may gradually be added until finally the formula contains equal parts of each ingredient.

Some Recent Inquiries and Researches Into the Poisoning Properties of Naphthalene and the Aromatic Compounds.—White and Hay (*Lancet*, August 31, 1901) report observations on the toxic effect of the dinitro-benzene compounds in workers who handle these substances in the manufacture of high explosives, and experiments on cats to prove the absorbability of the compounds through the skin. In a number of cats a small area of skin on the back was shaved, and after allowing an interval of two

or three days for healing tears or excoriations, through which undue absorption might take place, an ointment containing twenty-five per cent. dinitro-benzene was applied and a gauze dressing sealed over it with collodion. In from one to four days a cyanosis developed, reflex irritability was increased, and the gait became, at first rather stiff, finally spastic; the animals dying in an asthenic condition, with twitchings of the head and paws. The blood was found to be of a chocolate color, giving on spectroscopic examination a dark absorption band corresponding to that of methemoglobin. The red corpuscles were misshapen and small. No dinitro-benzene could be found in the urine, which was in most cases normal. The liver in one case had undergone fatty degeneration; in another case the kidneys showed a parenchymatous inflammation.

Dr. Hay produced symptoms in himself, similar in a milder degree to those observed in cats, by rubbing a quantity of the ointment containing one and one-half grains of dinitro-benzene into his groin. He developed, on the second day, marked blueness of the lips and finger-nails, some headache, a rapid pulse and a slight tremor. These gradually disappeared in the course of three days.

Chemically pure and absolutely dry dinitro-benzene is absorbed by the skin with difficulty, but in ointment or in contact with impurities which occur in the commercial product it easily passes through the skin, particularly with the friction incident to manipulating it.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF R. B. H. GRADWOHL, M. D.

Salivary Lithiasis.—(Salomon, *Progres Medical*, August 17, 1901.)—Salomon describes a case of salivary lithiasis. The stone weighed 7.25 grammes and was found in the duct of the Steno. The history of the case is interesting: first, because of its size and weight; secondly, because it was carried nearly thirty years *in situ*; and thirdly, because it occurred in a woman—most of the cases reported having been in males. The frequency of occurrence of salivary calculi is in the proportion of eighteen instances in females to eighty in males.

Cardiac Atrophy and Hypertrophy.—(John Gutch, *Jour. of Path. and Bacter.*, vol. vii., 1901.)—This writer made an investigation to determine whether hypertrophy of the heart is brought about by an increase in the number or size of the muscle fibers, or by both. Gutch worked with a micrometer eye-piece, one division in the scale of which was 0.0037, as tested against a standard scale, when the microscope tube was at its lowest. Specimens were taken from the left ventricular wall at the junction of the upper with the middle third, and near the ventricular septum; mus-

culus papillaris of the mitral valve; right ventricle front wall at the junction of the upper with the middle third; muscular papillaris of the tricuspid valve. The conclusions reached are: in normal hearts the fibers of the left side are broader than those of the right side, and on the average the fibers of the papillary muscle on each side are slightly less than the fibers of the wall, but this is not a universal rule. The fibers of the hypertrophied hearts are considerably broader than normal, indicating that the increase in size of the heart is largely due to hypertrophy of the individual muscle fibers. The increase in weight of the heart in conditions of hypertrophy is partly due to increase in size of the fibers themselves and partly to increase in connective tissue elements, which is seen particularly in the hypertrophied heart of chronic interstitial nephritis.

Histopathology of the Heart in Typhoid Fever.—(S. Drago, *Ziegler's Beitrage zur path. Anat. u. allegem. Path.*)—The author makes a microscopic study of the heart in two cases of fatal typhoid in soldiers. He found alterations in the blood vessels, connective tissue and muscular fibers, especially a filling-up of the blood vessels. Hemorrhagic areas were also found scattered throughout the heart's wall, irrespective of position; growth of lymphoid cells was found in otherwise slightly changed connective tissue, and finally disappearance of the muscular tissue leading to atrophy. This last condition, the writer suggests, might eventually cause heart rupture in typhoid fever.

Hemolymph Glands.—(Adred Scott Warthin, *J. of Med. Research*, July, 1901.)—Warthin gives a contribution to the normal histology and pathology of the hemolymph glands. He cites the fact that there are some lymph glands of the body, notably the prevertebral retroperitoneal glands, which have appeared to play an entirely different part from that played by the other lymphatic glands of the body. Lymph glands with blood sinuses are constantly present in the body. There are two types, the splenolymph and the marrowlymph glands, and between these forms there are transition forms. Under normal conditions the hemolymph glands are concerned in hemolysis and leucocyte formation. Specific changes showing their undoubted blood-forming function are found in these glands in certain diseases. The writer gives this contribution out as a preliminary report and states in conclusion that many new fields are opened up in the study of these glands. Perhaps a further study will solve the problems relating to blood-formation and pathologic conditions of the blood and blood-forming organs, as seen in the various forms of anemia, leucemia, etc.

A Histologic Study of Elastic Tissue in Normal and Diseased Organs.—(Melkinow-Raswedenkow, *Ziegler's Beitrage*, Bd. 26.)—The writer has studied the various organs of the body in health and disease with the use

of the newer elastic tissue stains. His results are as follows: In lymph glands elastic tissue forms a portion of the fibers, trabeculæ and pulp. Likewise in the spleen the same integral parts as the lymph glands show elastic tissue. Bone marrow contains no elastic tissue. The tongue contains elastic tissue, lying in the papillæ, the submucosa and between the muscle fibers. The capsule and the peritoneal tissue of the liver shows elastic tissue, but not the acini. The kidneys contain scarcely any elastic tissue at all. The heart of adults shows elastic tissue in the endocardium, myocardium and epicardium of all four chambers, while in the newborn the muscle cells of the ventricles are not surrounded by such. Blood vessels are the chief source of elastic fibers, which are present in all three coats. Capillaries have no elastic fibers. The larger lymph vessels show elastic tissue. The limiting membrane of the walls of serous cavities contains this tissue. The spinal marrow, the cerebellum, cerebrum and ganglia contain little elastic tissue. Spinal dura contains a good deal of elastic tissue, while the cerebral dura does not contain nearly so much. Bone contains but little.

The following changes in diseased organs are recorded by this writer: Long-continued stasis produces hyperplasia of the elastic constituents of organs. Hemorrhage and infarction produce quite an appreciable amount of tough elastic tissue. In hyperplasia and atrophy this elastic tissue formation becomes varicose and thicker. Degeneration of various sorts does not produce much change. It is especially increased in conditions of hypertrophy of connective tissue. The elastic tissue is destroyed in purulent inflammatory conditions.

Multiple Leiomyomata of the Kidney. — (Lartigau and Larkin, *J. Med. Research*, July, 1901.)—The authors report two cases of multiple leiomyomata of the kidney. The cases were accidental autopsy findings, occurring in women about thirty-five years of age, who died of pneumonia. The growths affected the left kidney in each instance. The capsule of the kidney of the first case was adherent at points corresponding to the location of the small subcapsular myomatous nodules. The growths on section were found to extend in the kidney cortex. Microscopic examination showed the presence of a mild grade of round-cell infiltration and albuminous degeneration in the cortex of the kidney. The changes of import consisted of the presence of bundles of rather loose unstriated muscle fibers running in different directions. In one case the bundles of myomatous growth were continuous with the capsule of the kidney, while in the other case this was not equally true. Study of serial sections of the tissue from the second kidney always revealed an intimate connection with the muscle fibers of at least one medium sized artery, sometimes two. The writers conclude their interesting report (which is but an abstract) by stating that myomata of the kidney are rare; leiomyomata may be multiple or discrete in distribution; they may have a two-fold origin: the capsule of the kidney and the blood vessels, and that multiple neoplasms of this nature may give rise to no symptoms during life.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF HUGO EHRENFEST, M. D.

Is the Kraske Operation Justifiable in Women?—(George M. Edebohls, New York, *Am. J. of Obst.*, August, 1901.)—Edebohls answers this question absolutely in the negative. If malignant diseases or otherwise incurable conditions of the lower part of the rectum necessitate its resection, the necessary excision can be made by the vaginal route, by perineotomy, by incisions lateral or posterior to, or circumscribing the anus, or by various combinations of these procedures. In cases calling for excision of the upper rectum in women, the vaginal route has recently been proposed as an easy way of access to the upper end of the rectum, as well as to the lower portion of the sigmoid. The author, however, prefers in these cases the abdominal route. He considers the latter preferable to the Kraske operation with respect to technique, after-treatment and comfort of the patient. He furthermore claims the superiority of adominal section in cases of high carcinoma of the rectum over the Kraske operation, on the following points:

I. A preliminary colostomy and, in favorable cases, a secondary operation for the closure of the artificial anus becomes unnecessary.

II. Removal of the sacral glands and of all affected tissues posterior to the rectum can be accomplished with greater facility and thoroughness.

III. The liver can be examined for secondary cancerous nodules immediately after opening the abdomen, and, if such nodules be found, the abdomen can be closed without inflicting further unnecessary operative injury upon the patient.

On the Influence of an Antisyphilitic Treatment of Pregnant Women Upon the Fetus.—(G. Riehl, Leipsic, *Wiener Klin. Wochenschr.*, November 26, 1901.)—By referring to statistics of different writers the author shows that the life of the fetus is greatly endangered by syphilitic infection of the mother; general antisyphilitic treatment during pregnancy does not seem materially to improve the viability of the fetus. In the majority of cases a syphilitic disease of the uterine cavity, involving the decidua or placenta, is responsible for the death of the fetus. This fact induced Riehl to believe that a local rather than general treatment of the mother might offer a better chance for the child. He therefore placed vaginal suppositories, containing fifteen grains of unguentum hydrargyri, just in front of the external os and continued this treatment for the rest of the pregnancy, exhibiting at the same time the usual antisyphilitic treatment in the interest of the mother. The results were better than expected. Out of thirty-three cases only four children were still-born. Riehl believes that the extremely favorable results are due to the local treatment, and recommends this simple procedure for extensive trial.

A Foreign Body Obstructing Parturition.—(Garnecki, *Deutsch. Mediz. Wochenschr.*, No. 23, 1901.)—Garnecki reports the following singular case: He was called to attend a labor case. On his arrival at the house the husband of the patient told him that a "tin box" would have to be removed from the genital tract before the baby could be born. An examination showed: Woman of twenty-seven years, well developed, pelvis normal, os uteri dilated to the size of a fifty-cent piece, head presentation, child alive, membranes ruptured, uterine contractions satisfactory. Between the head of the child and the os uteri lies a foreign body, the supposed tin box. On account of this obstruction the head was not able to dilate the os and a spontaneous termination of parturition seemed under these conditions impossible. Therefore removal of the body from the uterine cavity was decided upon. The box was turned until the lid came into view. The lid was then taken off and removed. It was now possible to grip the body of the box with forceps and to extract it by careful rotatory movements. The box was cylindrical, had a diameter of ten cm. and was four cm. high. The parturition was finally ended by means of forceps, after two dense, fibrous scars in the margin of the os uteri had been divided. The child was alive and fully developed. Puerperium was normal.

On inquiry the patient gave the following remarkable explanation for the introduction of this box: When twelve years old her menstruation appeared for the first time. In order to prevent a subsequent hemorrhage she introduced this box, in which she had kept pens, into her vagina. Nevertheless menstruation was always regular. Later she tried to remove the box, but did not succeed. She never consulted a physician, and never experienced any inconvenience. She married at twenty-five. Coition was never interfered with, and the husband was unaware of the existence of the box up to this confinement. When five months married she had a miscarriage in the fourth month of pregnancy. Up to this time she always had felt the box in her vagina, but after the abortion, to her surprise, it had disappeared. She was not able to explain the fact to herself, but was certain that the box had not fallen out. Thus it is beyond doubt that the box subsequent to the abortion slipped into the uterine cavity. It had been in the vagina thirteen and in the uterus one and one-half years without producing any noteworthy disturbances.

PEDIATRICS.

IN CHARGE OF JOHN ZAHORSKY, M. D.

Vaccination in Infantile Eczema.—(Stevens, *Can. Med. Rec.*, May, 1901.)—The writer relates an instance where infantile eczema was promptly cured by vaccination. The vaccination was performed in an emergency, at the same time having in mind the fact that eczema is usually given as a contraindication to vaccination. The marked curative effect induced him to try it in two other cases with the same happy results.

Pernicious Anemia in Infants.—(Rotch and Ladd, *Arch. Ped.*, Sept., 1901.)—The authors discuss the subject of pernicious anemia in infants and detail a preliminary report of a case. They point out that, in the present state of our knowledge, extreme difficulty is found in distinguishing the different blood diseases of children.

The disease is very rare in infancy. The youngest case reported by Demme was three months old. As to the etiology nothing positive is known outside of those cases of severe anemias due to the *ankylostoma duodenalis*. The pathological changes are similar to those which occur in adults.

The case reported occurred in a girl who, at four months of age, began to lose in weight, although she was breast-fed. Upon being placed on modified milk she again gained in weight. At five months she had a mild attack of measles. Attacks of indigestion appeared at intervals; pronounced pallor was present when ten months old. A systolic murmur was audible over the precordia, and puffiness of the face was noticed. Several blood examinations revealed the picture of pernicious anemia: for example, hemoglobin 20 per cent; leucocytes, 18,800; red blood corpuscles, 1,088,000; color index normal; megaloblasts and normoblasts present; poikilocytosis, macrocytes, and polychromatophilia. Anemia infantum pseudoleukemia was excluded by the absence of an enlarged spleen and the relative low number of leucocytes.

By careful dieting and the administration of iron preparations the infant recovered in about six months. The most effective part of the treatment was the timely inhalation of oxygen gas.

The Therapeutics of Whooping-Cough.—(Mays, *N. Y. Med. Jour.*, Sept. 7, 1901.)—Mays, in conformity with the belief that irritation of the pneumogastric nerve is responsible for the spasmodic cough, applies counter-irritants over these nerves in the region of the neck, and now claims to have the most signal benefit. His directions briefly are: Trace the pulsating carotids from the angle of the jaws to the clavicle. As the pneumogastric lies in close proximity to this vessel, this line serves as its landmark. Along this line gentle massage, a strip of mustard plaster,

the application of tincture of iodine or a mixture of camphor, chloral and menthol and other irritants may be used with great benefit. In very severe cases a hypodermic injection of silver nitrate along the course of the nerves must be resorted to. This line of medication causes the most remarkable effect in a few days.

Diabetes Mellitus in Childhood.—(Cotton, *J. A. M. A.*, Sept. 7, 1901.)—The author reports a case of diabetes mellitus in a child six years old, and briefly discusses the disease in general. His patient was treated with a diabetic diet, pancreatic extract and sulphate of sodium. She died in about two months.

Under etiology, heredity, congenital syphilis and infectious diseases are placed. An advanced case presents extreme inanition, emaciation, muscular weakness, dry skin and hair and extreme irritability. Polyphagia, polydipsia and polyuria are the special symptoms present. Recovery is very rare.

The Treatment of Intussusception.—(Bernard Pitts, *Ped.*, Sept. 15, 1901.)—Pitts opened the discussion on this subject in the Section on Diseases of Children at the recent meeting of the British Medical Association. He gives a table of one hundred and fifteen cases, showing sex, age, variety, treatment and result. In the table one hundred and five cases were children under twelve years of age, and of these thirty-six recovered. Primary abdominal section is now the rule, and the mortality has been lately reduced to fifty-eight per cent. His present conclusions:

1. Inflation or injection should be tried only if the case is seen within a very few hours and if the symptoms are not very acute.

2. Inflation may be a useful preliminary by limiting the field of operation.

3. When resection is necessary this may be followed by reunion of the bowel in chronic cases. In acute cases a wide resection may be carried out at once; an operation for the restoration of continuity of the bowel at a later period.

D'Arcy Power at the same meeting reported sixty-five cases with forty-two deaths. Only one case in which resection was done recovered. He advocated immediate operation.

Growing Pains.—(Hale, *Ped.*, July 15, 1901.)—Hale refers to the frequency with which the general practitioner meets what are termed "growing pains" by the laity. He believes these pains almost always to be rheumatic manifestations, and reports cases which support this view.

True Dental Stigmata of Syphilis.—(*Pediatrics*, August 1, 1901.)—In an editorial attention is called to the fact that the subject of the teeth in hereditary syphilis is enveloped in mist to the great majority of medical practitioners. The milk teeth are subject to decay and irregular

growth from a variety of causes, such as fevers, stomatitis, rickets and malnutrition. Erosions, facets, hollows and deformities may be found, but there is nothing characteristic in these.

In the second set, however, when the general health is good, changes occur which are more or less characteristic:

1. *Irregular decay*. Cupping or hollowing, or general "collapse." This may be suspicious, but is too often seen elsewhere to be of great value.

2. *Furrows (dents rayes)*. Certain of these may be cause for serious consideration; the "sulciform erosion" of Parrot belongs to this class.

3. *Microdontism*. This is emphasized by Fournier. He attributes greatest significance to the dwarfism of the incisors.

4. *Atrophy of the crown*. The top of the tooth has a shrunken and wrinkled look, comparable to a small tobacco-pouch with the strings pulled tight. This change may occur as far back as the first molar. In the incisors the cutting edge decays more at the center than the margins, and we get the tapering tooth with concave, half-moon cutting edge (Hutchinson's teeth).

5. *Chalk lines (sillons blanc)*. These are rare. They are described as milky or chalky in color, and found on the two upper front permanent teeth. They are horizontal, symmetrical, about one millimeter in width, and occur midway between the gum and the crown.

NEUROLOGY.

IN CHARGE OF SIDNEY I. SCHWAB, M. D.

A Clinical Classification of Insanity.—(F. X. Dercum, *Jour. of Nervous and Mental Dis.*, September, 1901.)—This is a notable attempt to form a classification of insanity based upon clinical data. The author believes that such an attempt is possible at the present time. There can be no doubt that a classification based upon anatomical and pathological evidence is the one that must finally prevail, yet our knowledge in these respects is too meager as yet to make such a classification satisfactory or useful. Inasmuch as insanity is, above all, a clinical and personal phase of disease, the best way to approach its study is from the point of view of practical medicine. For this reason the author considers first the commonest form of abnormal mentality, the one that is most frequently met with by the general practitioner. This form, of course, is delirium. The deliria are divided as follows: *First*, simple febrile delirium. *Second*, specific febrile delirium (Bell's delirium, acute delirious mania, etc.). *Third*, afebrile delirium. With delirium are grouped the conditions which are best described as confusion and stupor. The second group consists of mania-melancholia, and their combination with period sequences under the form

of circular insanity. Following the recent trend of thought on this subject, the writer believes that these forms are not to be sharply differentiated, but that they are phases of one condition, to which he gives the name melancholia-mania. *Third*, paranoia. *Fourth*, neurasthenic insanity. *Fifth*, dementia. These five are regarded as simple or elemental phases of insanity. Insanity in relation to the various epochs of life, infancy, puberty, early adult age, mature adult age, middle age, and old age is next considered. Idiocy and imbecility are held to be purely quantitative defects, with gross pathological lesions, and are, therefore, not insanities. The age of puberty is characterized by the appearance of the precocious dementias, such as hebephrenia, katatonia, dementia, paranoides; early adult age by the melancholia-mania syndrome; middle life by melancholia. In old age the forms classed as senile dementias are most commonly found. Thus far the subject of insanity has been approached from two points of view: *first*, from that of its simple or elemental forms; *secondly*, as these forms bear relation to the different epochs of life. In order to complete the classification, the relation of insanity to diseases in general must be considered. In regard to the acute infections, delirium, confusion and stupor are the forms most commonly met with. Alcoholic insanities are divided into delirium (delirium tremens), confusion, stuporous insanity, simple alcoholic dementia, and alcoholic dementia with systematized delusions. Similar facts are presented in the insanities produced by lead. The author concludes by noting the following: *First*, all mental disorders arising from diseases and morbid physiological states belong to the symptom group of delirium, confusion, stupor, dementia. *Second*, the melancholia-mania syndrome bears no relation to the various infections, intoxications, or visceral diseases. They are diseases primarily of the nervous system. *Third*, the delirium-confusion-stupor syndrome may occur at all ages. Melancholia-mania and paranoia are related to different periods of life. *Fourth*, the delirium-confusion-stupor syndrome usually occurs independently; its forms may, however, occur as complications or episodes in any of the other affections.

The Supra-Orbital Reflex. (D. J. McCarthy, *Neurologisches Centralblatt*, No. 17, 1901.)—This new reflex, discovered by McCarthy, deserves to have a more important place clinically than most of those which have recently been described. It is obtained by striking with the percussion hammer the supra-orbital nerve. A fibrillary tremor of the orbicularis palpebrarum results. This constitutes the new reflex. The eyes do not close. If the reflex is increased, it can be elicited by stimulating the nerve anywhere in its course. The reflex arc consists of the supra-orbital branch of the fifth, the fifth nerve itself, the seventh and its branch to the orbicularis palpebrarum. In one hundred normal persons examined it was obtained in every case. Clinically the examination for the reflex resulted as follows: In a case of brain syphilis it was

absent on the left side, and in a case of tic. douloureux it was absent. In facial paralysis it was constantly found wanting. In twenty-five cases of tabes the reflex was found to be present, in twenty-three cases lessened, and in two cases totally absent. The author believes that this reflex proves that a correlation of function exists between the two orbital branches of the fifth and seventh nerves.

A Case of Generalized Polyneuritis, with Facial Diplegia, Probably of Gonococcal Origin.—(F. Raymond, *Le Progres Medical*, July 27, 1901, No. 30)—That an infection of gonococcal origin has more than a local importance has been amply demonstrated by numerous clinical observations. Gonorrheal rheumatism, endocarditis, peritonitis, etc., are now scarcely to be regarded as clinical curiosities. Its effect on the nervous system has not been actually demonstrated for the cases of myelitis in which there was a history of gonococcal infection have not stood the test of careful clinical examination, as in no case has the gonococcus been actually found in the cerebro-spinal fluid or in the cord itself, yet the direct sequence of the infection and the appearance of nervous symptoms leaves no other explanation as to its origin possible. The following case seems to prove conclusively the existence of a blennorrhagic polyneuritis. Case: Man, thirty years old, contracted gonorrhea, the acute stage of which lasted five weeks; at the end of that time a prickling sensation and numbness appeared in the lower extremities. Motor paresis then appeared to such an extent that the patient could not walk. The upper extremities and the face were successively attacked. There was marked hyperesthesia of the lower extremities. Facial paralysis was especially severe. Electrical examination of the extremities showed normal condition of nerves and muscles, but the facial nerves, on both sides, showed the reaction of degeneration. Improvement took place gradually, and in the course of a month or so the extremities regained their normal function.

Treatment of Febrile Delirium Tremens by Cold Bathing.—(M. Salvant, *Gazette des Hopitaux*, September 5, 1901.)—Salvant calls attention to this method of treating delirium tremens, derived from the good results of bathing in febrile conditions due to infectious diseases. The patient with delirium tremens is first isolated. No force should be used. Liquid nourishment should be given. If the rectal temperature is higher than 39° , cold bathing is indicated. The temperature of the bath should be 18° , when the state of the heart permits; in presence of a tendency to collapse, the temperature of the baths should be raised to 25° or 28° . The duration of the bath is from five to ten minutes; if the pulse shows no weakening it can be prolonged to fifteen or twenty minutes. It is better to give frequent baths rather than to prolong each one. They should be continued until the delirium and fever have disappeared. The baths should be given under the personal direction of the physician, special attention being paid to the condition of the heart.

GENITO-URINARY SURGERY.

IN CHARGE OF H. MCC. JOHNSON, M. D.

Prognosis and Treatment of Gonorrhœa.—(Neisser, *Cleveland Medical Gazette*, September, 1901; Transl. McMurtry.)—In reply to questions from a special committee of the American Medical Association, Neisser says practically all cases of gonorrhœa are curable if properly treated. While cases of gonorrhea of the anterior urethra present less difficulty, even in those of the posterior urethra complete recovery can be obtained through prolonged treatment. He condemns astringents in the acute stages, using unirritating germicides. In almost all anterior urethrites, prolonged injections are as effective as irrigations. Protargol for anterior injections, in one-quarter to one-half per cent. solution, occupies first place. For the posterior urethra one to four per cent. is the proper strength. Chronic cases are treated with bactericidal solutions as long as gonococci can be demonstrated. When these have disappeared, astringent solutions may be used. While there is no test upon which we may rely with *absolute certainty* for the absence of gonococci, if, after careful and repeated examinations, with the aid of mechanical and chemical means for provoking their presence, they cannot be demonstrated, we may allow the patient to marry, with assurance of protection to the wife, as far as we are able to judge.

Prognosis and Treatment of Gonorrhœa.—(Burnett, *Cleveland Med. Gaz.*, September, 1901; Transl. McMurtry.)—Burnett considers one hundred per cent. of cases of gonorrhœa curable, provided the patient has no other disease. Irrigations of the urethra with germicidal solutions, combined with appropriate internal medication, is the best means of controlling the disease in acute urethritis. Chronic cases must be treated, according to indications, by irrigation, injection, endoscopic application, the sound, massage of prostate, and stripping of the seminal vesicles. It is unsafe to depend upon the absence of gonococci from the urethra to allow marriage. They may remain imbedded in the urethral tissues in a latent state for years. There is no test that can be relied upon to determine their absence from the urethra. After a period of activity and decline, the original virus seems to lose its power for damage. The disturbance left is due to the damage previously done to the anatomical structures, which may disappear of itself or continue unabated. The two most powerful factors in the creation of sexual disturbances, alcoholic stimulation and excessive sexual excitement, may bring about the recurrence of a gonorrhœal inflammation of the urethra that has been, to all practical appearances, cured of a former attack. On the other hand, sexual rest, brought about by purely physiological intercourse, or absence of excitement of the sexual apparatus, may conduce to such a quiescent stage of the gonorrheal

germ, that a man may marry with the assurance that, as long as he is temperate in his habits and true to his marital vows, his former gonorrhœal sins will not be visited upon his wife. And so, after we have repaired the damage done a urethra by gonorrhœa and find, after an interval, that may vary from six weeks to six months, that there is no more discharge and that the urethral mucous membrane appears healthy through the endoscope, we can say to our patient that he is in a condition to marry.

The Roentgen Rays in the Diagnosis of Urinary Calculi.—Cummings (*Canadian Practitioner and Review*, July, 1901) regards the X-rays as a means of positive diagnosis in calculous diseases of the urinary tract, being of special value in the vague and doubtful cases. He gives short histories of eight cases which he has skiagraphed, in three of which the presence of stone was confirmed by operation. Two cases in which the X-ray showed stone were not operated upon. In the three other cases, although there were symptoms of stone, the skiagraph showed none to be present.

In four cases of urethral calculi, all of them gave positive results with the X-ray. The diagnosis in Case I. was confirmed by the scratch on a wax-tipped ureteral catheter, and subsequently by the passage of the calculus. A later skiagraph in Case II. showed that the calculus had moved down the ureter to within one inch of the bladder. Case III. subsequently died of uræmia and terminal infection. Repeated skiagraphs in Case IV. showed the calculus in the same position.

By this means vesical calculi can be more simply and accurately diagnosed than by the ordinary methods. Out of the four cases reported, all with positive results by skiagraph, failure to detect the stone by sounding in two of them had occurred. In one case the fact that the stones were not encysted was readily proven. By rolling the patient over on his abdomen, after having taken a skiagraph in one position, and again exposing him to the X-rays, showed the stones had changed their location. A large stone was noted by means of the skiagraph in Case IV. This was thoroughly removed by litholopaxy. Six months later, because of distressing symptoms, the patient was again subjected to the X-rays, demonstrating a large stone in the bladder, two smaller ones in the right ureter, and one small stone in the left ureter. The bladder stone had evidently dropped into the organ after the first operation and rapidly grown. This was removed by litholopaxy. A subsequent skiagraph showed the bladder free of calculus, but the ureteral stones still in place.

Double Ureter of the Right Kidney.—(Scudder, *A. J. Med. Sc.*, July, 1901.)—The author reports a case of double ureter of the right kidney. One ureter, which was patulous, connected the kidney with the bladder, while the other, which was blind, ended as a closed sac about the diameter of the thumb, and extended from the kidney to the neighborhood of the

internal urethral meatus. The latter was enormously distended, so that at its widest part it measured eleven cm. It was very tortuous and was filled with a yellowish fluid containing leucocytes and bacteria. Each ureter had a separate pelvis. The child, twenty months of age, presented symptoms of abdominal origin: high temperature, rapid pulse, abdominal distention and distressed countenance. A laparotomy showed the peritoneum and appendix normal in appearance, with no omental or intestinal adhesions. The child's grave condition prevented further procedure. The abdominal incision was stitched up, the child dying within twenty-four hours.

DERMATOLOGY.

IN CHARGE OF M. F. ENGMAN, M. D.

The Role of the Streptococci and Staphylococci in the Etiology of Skin Diseases.—(Dr. R. Sabourand, *Brit. Jour. of Derm.*, September, 1901.)—At the sixty-ninth meeting of the British Medical Association, Dr. Sabourand states that there are three bacteria of the "coccus" group which are mainly concerned in the production of skin diseases:

1. A streptococcus which is identical with the streptococcus of Fehleisen, and capable of showing wide variations of virulence. It is the cause of erysipelas and allied diseases, and concerned in the production of elephantiasis. The specific lesion of this coccus in the skin proper is the "phlyctene" (small pin-head vesicle) or the bullæ of impetigo of Fox. In addition, he considers the streptococcus the causative factor in certain superficial ulcerations and crust formations, to which he gives the name of "rupia," using the old dermatologic significance of the word; and that it also enters as a complicating factor into many inflammatory affections of the skin.

2. The staphylococcus pyogenes aureus of Rosenbach is concerned in the production of the majority of cutaneous suppurative diseases—as carbuncles, furuncles, and many cases of acne, especially where necrosis of tissue occurs, and in suppurative folliculitis. It is also the special cause of Bockhardt's impetigo.

3. A coccus producing grayish-white cultures, which he designates as the staphylococcus cutis communis. This coccus is found in great numbers upon the skin, and must be considered as the cause of the mildly inflammatory affections accompanied by desquamation, such as are typified by pityriasis capitis, seborrhea corporis, the circinate seborrheic dermatitis of English writers, and is identical with the coccus described by Unna as his *morococcus*, claimed to be the specific cause of all forms of eczema. That this organism is the cause of eczema is considered by Dr. Sabourand an untenable thesis, its main property being the power to produce desquamation of the upper epithelial layers of the skin, which is

its characteristic pathogenic effect. The essayist considers the flask or bottle bacillus of Unna, which is so prevalent in all seborrheic conditions, as probably a degenerate or involuntary form of the staphylococcus cutis communis.

In his concluding remarks Dr. Sabourand made a guarded reference to the relationship between this coccus and the staphylococcus pyogenes albus, emphasizing the extreme degree of variation in virulence and in cultural characteristics existing in this group of organisms.

Roentgen Rays in the Treatment of Diseases of the Skin.—(W. A. Pusey, *J. A. M. A.*, September 28, 1901.)—An analysis of clinical reports and of the reports of microscopical studies of tissues affected by X-rays indicates broadly that this method of treatment may be of use in the following conditions: (1) In conditions where it is desired to produce an atrophy or partial atrophy of some appendages of the skin, as in hypertrichosis. (2) In mycotic diseases, such as tinea tonsurans, favus and sycosis. (3) In chronic inflammatory affections, such as indurated patches of eczema and lupus erythematosus, where the purpose is to stimulate the tissues and cause absorption of inflammatory products. (4) In certain specific affections, such as lupus and epithelioma, where the purpose is to cause the destruction of tissues of low vitality. The author believes that the effects of the X-rays are due to the peculiar stimulation of the tissues which they cause, and not to any strong bactericidal effects in the rays themselves. The essential factor is something in the rays themselves, and not, as has been suggested, to some incident of their production, like ozone, or brush discharges, or induced electrical currents in the tissues or parts of platinum carried off from the auticathod. Some excellent photographs accompany the article of a case of lupus and one of epithelioma treated by the rays, which show encouraging results.

Mosquitoes and Leprosy.—(*N. Y. Med. Jour.*)—At a recent meeting of the French Academy of Medicine (*Gazette hebdomadaire de médecine et de chirurgie*, August 4th) M. Blanchard suggested that mosquitoes might possibly convey leprosy, whereupon M. Chantemesse made the remarkable statement that, as a matter of fact, observations seemed to prove that transmission of leprosy always took place during the night. It might have been well to give the foundation for such an astounding remark.

On Streptothrichal Infections.—(J. H. Musser, *Phil. Med. Jour.*, September 7, 1901.)—After reviewing the literature of the subject, which is very interesting from a dermatological standpoint, the author arrives at the following conclusions:

1. That the streptothrix in some varieties is pathogenic to man, and gives rise to inflammatory, suppurative and necrotic lesions in (*a*) the

lungs, (b) skin and (c) by metastasis, probably, in the brain and spinal cord, and rarely other organs (the kidney).

2. That while this pathogenicity is more than likely, and is primary, yet it must be remembered it may be a secondary growth in the course of other infections.

Treatment of Tuberculosis with Urea.—(A. H. Buch, F. R. C. S., *Phil. Med. Jour.*, September 14, 1901.)—The idea of this treatment is founded upon the fact that gouty or rheumatic persons are particularly immune to tubercle; therefore, urea is given to increase the amount of uric acid or urea in the systems of the tuberculous. The author reports three cases of lupus and two of scrofuloderma cured by its internal administration without active local treatment. From twenty grains to a drachm of the agent is given three times a day. The author believes that this discovery will revolutionize the treatment of tuberculosis.

Dr. Buch is not the originator of the idea, but Dr. Harper, of Nottingham, to whom he gives full credit.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF WILLIAM E. SAUER, M. D.

Treatment of Acute Suppuration of the Middle Ear.—(E. Bochner, *Archiv fuer Ohrenheilkunde*, June 20, 1901.)—The author recommends the so-called dry treatment as being the best method.

In all acute suppurations the patient is put to bed, given a sweat bath and a brisk cathartic. The canal is thoroughly wiped out by means of absorbent cotton on an applicator, and a strip of sterilized gauze is carried to the bottom of the external auditory canal, which is not to be packed in too tightly. Over this is placed a dressing of gauze and absorbent cotton and held in place by bandage. If the discharge is very profuse the dressing should be changed every twelve hours, but if not so profuse once in twenty-four hours will suffice. The advantages claimed are: The patient can be kept at rest; a regular and constant drainage; the freedom from any dangerous nostra being introduced into the ear by the patient.

Tracheal Injections.—(J. A. Thompson, *Cin. Lancet-Clinic*, No. 9, 1901.)—The author reports two interesting cases treated by tracheal injections.

One an advanced case of pulmonary tuberculosis, with such severe paroxysms of coughing that the patient vomited all her meals and got very little sleep. She was failing rapidly and her death was apparently only a matter of weeks. All internal medication had failed to control the symptoms. She was put on a course of injections of menthol, camphor and guaiacol, given daily. The first injection relieved the cough for eight

hours. Her general condition improved rapidly, and all unfavorable symptoms disappeared.

With occasional relapses the patient lived for nine years, but finally succumbed to the disease.

The other case was one with gummatous deposits in the lungs, which had broken down and were producing a very large amount of offensive discharge. The history of syphilis extended back several years. The patient had been under the constant care of physicians for four years, but internal medication had failed to relieve her symptoms. She had lost fifty pounds, had an evening temperature of 104° , and her condition indicated speedy dissolution. The daily injections of menthol, camphor and guaiacol were given, and after six weeks the cough and expectoration had ceased. In three months the patient was restored to her former weight and strength.

The injection method was also used in cases of acute bronchitis after free expectoration had begun, thereby cutting short the duration by one-half. Especially good results were obtained in the treatment of chronic bronchitis as well.

The technique used is as follows: The larynx is illuminated in the ordinary way. The patient holds his own tongue while the physician guides the tip of a properly curved laryngeal syringe back over the glottis. Then, while the patient takes a slow, full inspiration, the medicine is injected between the chords into the trachea. If the patient follows the directions as to the method of breathing, the injections are easily given. In only a few cases did the author find it impossible to give the injections. Usually the amount of coughing and strangulation produced is slight.

The most effective medicines used by the author are menthol, camphor, creosote and guaiacol carbonate, and chlorophenol dissolved in one of the light petroleum oils or in olive oil. Two per cent. solutions of menthol and camphor, either singly or combined, were used without pain or irritation.

The carbonates of creosote or guaiacol are painful if used stronger than in one per cent. solutions.

Two to four drachms may be employed for each injection.

The advantages claimed for this method are:

The direct local action of the remedy.

The medicines reach the diseased area unchanged by chemical action in their passage through the digestive organs and the blood.

They do not unfavorably affect digestion and nutrition.

OPHTHALMOLOGY.

IN CHARGE OF JOHN GREEN, JR., M. D.

Three Operations of Cataract Extraction in Septic Conditions.—(Freeland Fergus, *Ophthalmic Review*, September, 1901.)—CASE I.—Elderly female in fairly good general health. Left eye, mature cataract with active pupil and good projection. Bacteriological examination of conjunctival sack showed B. Xerosis. No pyogenic organisms. Left nostril contained a large polypus apparently free from discharge.

Operation (upper section with iridectomy) was normal. The following day pus was seen coming from the left nostril; nasal discharge continued four days, diminishing under mild antiseptic syringing. In the meantime the condition of the eye was in every respect satisfactory. A sharp rigor occurred on the fifth day—later the patient complained of pain in the head. Pus ceased coming from the nose. Temperature 99° F. Symptoms of septicemia became more and more manifest, and the patient succumbed fourteen days after the operation. The corneal wound had healed throughout.

At the autopsy the left nasal fossa was opened from above: a spherical polypus with long thin pedicle was found to "block the nasal fossa about the level of the middle meatus." The sphenoidal sinus contained pus, and the superior and middle turbinates were bare and eroded. It is supposed that pus accumulated in the upper portion of the nasal fossa behind the obstructing polypus.

CASE II.—Female, middle aged. Mature senile cataract complicated by chronic dacryocystitis. Preliminary removal of the lachrymal sack was performed. The conjunctival sack was irrigated several times a day for three weeks, when pyogenic organisms could no longer be found. Extraction with iridectomy was followed by uncomplicated healing and good vision.

CASE III.—Male, age 74. Mature cataract of left eye. Pyogenic organisms found in conjunctival sacks. Pus coming from the left nostril was found to originate in the antrum. Evacuation through perforation of the alveolar border was followed by frequent irrigation with sterile water for two weeks; lavage applied also to conjunctiva. Bacteriological examination at end of this period showed conjunctiva free from pus organisms. Extraction with iridectomy gave excellent vision.

Fergus concludes that (1) bacteriological examination should be made before operation, (2) the condition of the cavities in the neighborhood of the orbit should be thoroughly investigated.

Spontaneous Resorption of a Cataractous Lens.—(Trousseau, *Annales d'Oculistique*, March, 1901.)—The lenticular opacity developed four months

after a successful iridectomy for acute glaucoma. A month later V. was reduced to light perception, but projection remained good. Extraction was deferred on account of ill health. Four months later V. began to improve. Examination showed that the upper half of the pupil was clear, the lower half still occupied with lens masses, with + 12. D. sph. $V = \frac{1}{8}$. Resorption continued, the pupil became wholly clear, and with + 12. sph. $V = \frac{2}{3}$. A delicate membrane occupied the lower one-fourth of the pupil. Glaucomatous phenomena did not reappear.

Trousseau believes that resorption is especially frequent in cataracts occurring in glaucomatous eyes.

The Eye Complications in a Case of Ankylostomiasis.—(Howard F. Hansell, Philadelphia, *Am. Med.*, September 14, 1901.)—Hansell examined the eyes of Allyn's patient (history in full in *Am. Med.*, July 13, 1901) and found the following conditions: Scleræ white and bloodless, conjunctivæ transparent, media clear, fundus reflex *light pink* (patient was a pronounced brunette), papillæ edematous, retinæ around disks infiltrated with serum.

Right eye. Two small linear extravasations to lower nasal side of papilla.

Left eye. Round hemorrhage near fovea. A few "flame-like" extravasations.

Retinal arteries showed no anatomic change, but "looked like transparent lines." Veins tortuous, darker than arteries, but lighter than normal. Venous current could be seen.

BOOK REVIEWS.

A Text-Book of the Practice of Medicine. By JAMES M. ANDERS, M. D., Ph. D., LL. D., Professor of the Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Fifth edition, thoroughly revised. One handsome octavo volume of 1297 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Co. 1901. Cloth, \$5.50, net.

The present (fifth) edition of this text-book has been brought thoroughly abreast of the progress of the past year in medicine. The most thorough revision has been made in the section on infectious diseases, particularly in the articles on typhoid fever, cerebro-spinal meningitis, lobar pneumonia, chronic tuberculosis, and variola. The article on malaria contains a brief but complete exposition of the life-history of the malarial plasmodium and the steps which led to its discovery. In the article on yellow fever scant space is allotted to the eminently well-devised, conclusive and epoch-making experiments of Reed and his associates. New paragraphs have been inserted under these respective subjects: fatty infiltration of the heart, streptococcus pneumonia, and acute diffuse interstitial nephritis.

Essentials of the Diseases of Children. Saunders' Question Compends Series. By WILLIAM M. POWELL, M. D. Third edition. Thoroughly revised by ALFRED HAND, JR., M. D., Dispensary Physician and Pathologist to the Children's Hospital, Philadelphia. 12mo, 259 pages. Philadelphia and London: W. B. Saunders & Company. Price, \$1.00, net.

In this revised edition numerous additions and changes have been made in the book, so that it continues to represent the present state of pediatrics. The section on Infectious Diseases has been rewritten, as well as many of the paragraphs on Pathology. A number of new chapters have been added, among others, one on Infant Feeding.

It is difficult to find any use of such a condensed work other than as a rapid means of reviewing a subject prior to an examination. The general practitioner may find it useful, on account of its small size, but as a guide to pediatric practice it is hardly to be recommended, even to the student.

Journal of Medical Research. Continuation of Journal of the Boston Society of Medical Sciences, Vol. vi., No. 1, whole number 62, 300 pp. Price, \$2.50.

The Journal of the Boston Society of Medical Sciences has been continued under the name of the *Journal of Medical Research*. The first number, issued July 1, 1901, contains papers read before the first meeting of the American Association of Pathologists and Bacteriologists held in Bos-

ton, April 5 and 6, 1901. The number is a most substantial indication of the high scientific attainments of the members. Each paper represents original research, and all are worthy of unstinted praise.

The journal is edited by Harold N. Ernst, of Harvard University. The initial number contains excellent articles, that by Prof. Warthin, of the University of Michigan, on Hemolymph Glands, being exceptionally interesting and valuable. Another interesting paper is that on the *Streptococcus Mucosus*, by Howard and Travis, of the Western Reserve University. It classifies several different organisms which have been heretofore described under different names as one species, the *streptococcus mucosus*.

Die Carcinomlitteratur. Eine Zusammenstellung der in- und auslaendischen Krebschriften bis 1900. By DR. ROBERT BEHLA. Published by Richard Schoetz, Berlin, Germany. Price, 6 marks.

This book gives a list of about 5500 different publications on carcinoma. The author includes all papers and books, which deal with etiology, histology, diagnosis, therapy, operations, prognosis, prophylaxis, etc., of cancer, published all over the world up to the year 1900. He furthermore adds the literature on carcinoma of animals and plants, because the aspect of this subject has recently attracted the attention of investigators.

The arrangement of this enormous material is admirably clear. The first part of the register contains the titles in alphabetical order of the authors' names, the second the papers arranged according to their contents. There are two subdivisions: Carcinoma in general, and carcinoma as it manifests itself in different organs.

The idea of the author, who started this work in 1875, was to give the carcinoma investigator a synopsis of the whole material in existence. This compilation is undoubtedly the most complete ever published.

In a short but significant preface Behla gives a review of the history and of the modern attitude in the cancer question, which to-day occupies the very center of medical interest.

Syphilis: Its Diagnosis and Treatment. By WILLIAM S. GOTTHEIL, M. D., Professor of Dermatology and Syphilology, New York School of Clinical Medicine; Dermatologist to the Lebanon and Beth-Israel Hospitals, the West-Side German Dispensary, etc. Profusely illustrated. Pages, 216. Price, \$1.90, net. G. P. Engelhard & Company, Chicago. 1901.

The author, in this well-illustrated book, which is written in a pleasing style, presents the subject concisely and pointedly. There is so much to be said upon syphilis that it is difficult to do the subject justice in so few pages. While preference is given to the hypodermic method of treatment, and the reasons therefor are clearly explained, the other modes of medication are not neglected. The mild type of the disease in communities where it has existed for centuries is accounted for on the theory of immunity. The book is well arranged and printed.

THE INTERSTATE MEDICAL JOURNAL.

NOVEMBER, 1901.

ORIGINAL ARTICLES.

CARCINOSIS OF THE INTERNAL GENITAL ORGANS IN THE FEMALE.

BY GEORGE GELLHORN, M. D., of St. Louis, Missouri.

(WITH THREE ILLUSTRATIONS.)

We apply the term "carcinosis of the internal genitalia in the female" to two forms of the disease which, at least in the early stages, can be well differentiated. To the first category belong those cases in which the carcinoma, primarily originating in the uterus or ovaries, by readily forming numerous metastases, soon affects the adjacent structures, such as the peritoneum, parametrium and lymphatic glands, and finally involves the other genital organs. The neoplasm shows in these cases a tendency to progression into the deeper layers. In its transgression and destruction of the tissues on its way, it does not respect the normal bounds of the pelvic organs. Thus within a comparatively short time the whole pelvic cavity becomes the seat of a large mass of diseased tissue which threatens sure and rapid dissolution to the organism affected.

In contradistinction to this category, there is another form of carcinosis of the internal genital organs, in which the advancement of the neoplasm does not take place in the usual way through lymphatic metastases, as just pointed out, but *per continuitatem*. In this second class, which is but seldom met with, the carcinoma remains limited to the epithelial surface; at least in the beginning it advances altogether by creeping along the epithelial stratum, involving only those portions of the inner genitalia which are lined with epithelium. The growth of the neoplasm is a superficial one upon the epithelial layers and within them, and only in the latter stages may the deeper layers be affected. Therefore, we find in these cases the normal shape of the diseased organs preserved.

The following contribution will be devoted entirely to a consideration of the second category mentioned: carcinosis of the internal genital organs *sensu strictiori*. Before entering upon a synopsis of the literature pertaining to this subject, I shall give an account of two observations of my own.

CASE I.—Mrs. K., *æt.* fifty-two, complains of severe pains in the abdomen for three weeks; no uterine hemorrhages since the menopause.

August 21, 1894.—Upon examination, diagnosis of a bilateral, malignant ovarian cyst is made.

August 24th.—Laparotomy (Dr. Mackenrodt). Extirpation of both ovarian cysts and fallopian tubes was performed, the latter being removed because they

were considerably thickened. Microscopic examination: carcinoma of the ovarian cysts and tubes.

August 25th to September 17th.—Convalescence undisturbed.

September 18th.—Profuse metrorrhagia suddenly occurs.

September 20th.—Curettement of the uterus. Microscopic examination of the scrapings: carcinomatous degeneration of the endometrium.

October 2d.—Vaginal extirpation of the uterus.

Complete recovery.

Undisturbed state of health until fall of 1895. Several examinations show the absence of recurrences.

September 12, 1895.—Patient calls again for examination on account of vaginal discharge. The upper end of the vagina is filled with a soft crumbling mass which extends into the abdominal cavity; recurrence of the carcinoma. Without the administration of chloroform, as many particles of the tumor as can be reached with the curette are removed. The largest of these soft fungous crumbs is of the size of a hen's egg. Hemorrhage is copious, but is checked by iodoform gauze tampon.

Patient returns to her native town, reporting from time to time that she feels fairly well. Early in 1896 her general health begins to fail; during the following months marked symptoms of cachexia become manifest, and patient dies June, 1896.

Both ovaries are cystic and are of the same size—about that of an ordinary orange. Figure I represents one of these tumors. It is covered with the normal smooth fibrous capsule, there being no papillomatous growths thereon. On cut section, no evidence of normal ovarian tissue can be made out. The tumor is made up of two distinct parts—a cyst representing the larger portion, and a solid mass representing the smaller. The latter shows a variety of isolated cystic cavities. The fibrous lining membrane of these cystic cavities is smooth except in a few instances where small, wart-like nodules resembling stringed pearls are to be seen. Papillomatous growths which are still very soft, even after being kept in an alcohol preservative for several years, spring from the thin, fibrous wall of the larger cystic portion of the tumor. Some of these growths follow the concavity of the inner surface, while others, represented by strand-like processes or nodular masses, ranging up to the size of a hazelnut, project into the cavity of the cyst proper. The aspect of these projecting masses could be likened to that of a bath-sponge of fine mesh—*i. e.*, fibers emerge parallel with each other from their common base, then go off in dendritic arborescences and finally anastomose freely with each other. Just like a sponge, when these fibers are swollen by imbibition, the structure of the papillomatous processes becomes more distinct, and fluid can be pressed out of them again.

Both fallopian tubes represent identical conditions (Fig. II). They are 9 and 10 cm. long. A probe of fine caliber can be passed through both the uterine and abdominal ostia. The walls are considerably thickened. The peritoneal surface shows remains of adhesions, but is otherwise normal. The fimbriæ at the abdominal extremity of both tubes are swollen and enlarged, and are still very soft, in spite of the long hardening process in alcohol. The inner surface of the fimbriæ is covered with the same papillomatous excrescences as described in the ovary. The tubes proper are tortuous and bent like a tobacco-pipe. They are unevenly dilated, the dilatation being more pronounced in the outer portion. The lumen is completely filled by a cauliflower growth which rises from the inner surface and is easily detachable from its base.* The greater part of these excrescences are soft, but some are brittle. They resemble the papillomatous excrescences in the ovary; imitating, however, in some places, the form of grape-like clusters. Here and there, fibrous septa arising from the tubal walls break

*In Figure II-it can be seen that these cauliflower excrescences have fallen off in some places.

in between the protuberances. Small round cysts, out of which the contents have fallen, are found in the tubal wall. Similar cysts still containing a marrow-like substance can be seen in the uterine extremity of the tube.

The uterus (Fig. III) is 10 cm. in length. In the left part of the posterior wall a subserous myoma, a little larger than a hazelnut, is protruding. Otherwise the outer surface appears normal. The fundus is considerably hypertrophied. The posterior wall is one-half cm. thick, being pushed out by a neoplasm which originates from the inner surface of the whole anterior wall of the corpus and of the upper third of the cervical canal. The irregularly shaped protuberance ends in an entanglement of fine villi, warts and papillæ. The lumen of the uterus being completely obliterated in this fashion, the growth impinges directly upon the posterior wall. In the hardened specimen, the border between neoplasm and normal tissue cannot be distinguished.

Upon the inner surface of the posterior wall there are miliary nodules which extend a little further downward than the neoplasm on the opposite side.

A microscopic examination was made of all parts of the internal genital organs. The pieces examined were hardened in alcohol, embedded in celloidin and stained in the usual way.

I found in the ovarian cyst the typical picture of adenocarcinoma: in the papillæ projecting from the inner surface there is an excessive increase of the glands. The glandular epithelial cells are cylindrical in form and show marked proliferation, which in some places results in filling the gland cavities and the interstitial spaces between the branches of the papillæ. In many places epithelial cells and leucocytes invade the connective tissue of the stroma of the papillæ. The wall of the ovarian cyst is made up entirely of connective tissue. Some small glands, in which the epithelium is several layers in thickness, can be found in but a few places, especially where the wall is somewhat thinner. These glands lie between the fibers of the connective tissue, near the inner surface. In deeper layers of the wall, near the outer surface, there are a few transverse sections of glands, the epithelium of which forms only one layer.

The tube also shows the characteristic features of adenocarcinoma. In no place, however, was I able to find the glands penetrating into deeper layers of the tubal wall.

Sections through the uterine wall, the seat of the neoplasm, present the following picture: the mucosa is raised up in the form of long, delicate, richly ramified papillæ, which are covered with but one layer of cylindrical epithelium. Within the lymphadenoid stroma of the papillæ numerous transverse and oblique sections of glands are seen; in these, also, the epithelium is but one layer in thickness. Other places, however, even in the same field, show marked proliferation of the epithelium, both on the surface of the papillæ and in the glands. The proliferated epithelial cells have not only penetrated into the stroma of the papillæ, but have also completely filled the spaces between the papillæ. In transverse sections, the glands are covered with many layers of epithelial cells in such a manner as to be almost entirely filled, forming solid masses in a few places. The stroma shows no longer the typical picture of the lymphadenoid tissue of the uterine mucosa. The scanty connective tissue lying between the numerous newly-formed glands has a distinct fibrillary structure.

At the base of the papillæ there commences the ingrowth of the glands into the innermost layers of the uterine muscularis. All the glands found here are lined with numerous layers of epithelium, even at those points where the papillæ are covered with but one layer, as described above. The greater part of the muscular wall of the uterus is perfectly normal.

Thus we find in the uterus an adenocarcinoma co-existing with its preliminary stage—i. e., a (malignant) adenoma.

The scrapings which were removed from the vagina at a later period, as before mentioned, show the typical picture of adenocarcinoma.

CASE II.—Mrs. S., fifty-five years of age. Menopause twelve years ago. Has had irregular hemorrhages for the last nine years. A “polypoid growth” was removed from the uterus by means of an electric snare four years ago by another physician. After an intermission of one year the hemorrhages returned, being increased in degree and frequency. The last one, seven weeks ago, was very copious. During the intervals between the hemorrhages, a great deal of “purulent” vaginal discharge of offensive odor. Patient has a hypertrophy of the thyroid gland, is very adipose, and is still gaining considerably in weight during the last months.

May 11, 1900.—Small pieces are removed from the cervix uteri for microscopical examination. The latter gives the histological picture of adenocarcinoma.

May 22, 1900.—Vaginal hysterectomy with the Paquelin cautery, so-called igniextirpation, was performed by the author. In connection with the uterus the left markedly thickened fallopian tube is removed, which is adherent to the posterior uterine wall. As the left ovary and the right appendages appear normal, they are left *in situ* in order to shorten the operation.

Complete recovery.

Patient has been examined since the operation October 9, 1900, May 31, 1901, and October 17, 1901. She feels perfectly well. Vaginal examination: soft scar in the vaginal fornix, no sign of recurrence.

The uterus is $12\frac{3}{4}$ cm. in length, the walls are 1 cm. thick. The whole cavity, including the cervical canal down nearly to the external os, is covered with a fungous new-growth which has, in spite of the alcohol hardening, retained its natural softness. The whole mucosa appears to be involved, and in no place is it possible to make out the smooth velvety surface of the normal mucous membrane. In the corpus the growth does not seem to penetrate deeply into the uterine walls. Only in the cervix has the growth advanced into deeper layers of the muscle, reaching the tissue next to the outer surface.

The tube, $7\frac{1}{4}$ cm. long, is tortuous and dilated by a growth that springs from the surface of the mucosa, and consists of many delicate finger- or tree-like processes, or takes on, in a few places, the form of small polypi, which are covered with small irregular elevations. The whole tube is very soft to the touch. The abdominal ostium is closed, the fimbriae being normal, while the uterine end is penetrable to a fine sound.

Pieces from different parts of both uterus and tubes were prepared for microscopical examination in the same manner as described in Case I.

In the uterus there is a typical adenocarcinoma. The glands are multiplied, have many layers of cylindrical epithelium, and are penetrating into the innermost layers of the uterine muscle, the middle and outer layers of the latter being entirely free. It is only in the cervix that the proliferated glands reach the outer muscle layer.

The walls of the tubes show a considerable increase of connective tissue. The normal folds of the tubal mucosa have nearly entirely disappeared; proliferation has taken place, and, as a result, many new glands are found. The cavities of some glands are filled. In others the outer contours are interrupted by epithelial cells which penetrate through the borders of the glands into the stroma. In the inner circular layer of the tubal walls some of the finest lymphatic vessels are already invaded by groups of polymorphous cells. Scattered through the tissue of the outer longitudinal layer there are a few large polymorphous cells, but no direct connection between them and the neoplasm in the mucosa can be detected.

The two cases which I have described in the foregoing illustrate very well the definition of carcinosis of the genital organs, *sensu strictiori*, which was given in the beginning. Both cases show the multiplication of cancer within the epi-

thelial stratum, the first presenting a more marked degree of development than the second.

In the older literature we find only a very few records of simultaneous carcinoma of both uterus and appendages. Before our knowledge of cancer had grown sufficiently to enable us to make a diagnosis in the earliest stage, in the cases which came to operation or post-mortem, the whole pelvic cavity was always found to be involved. A correct understanding was obtained when we began to operate at a time when the cancer was not yet too far advanced.

Reichel²⁴ was the pioneer in this question. In 1887, he called attention to those cases of carcinoma "in which uterus and ovary are alone the seat of the malignant neoplasm, and in which no other seat of the disease can be detected by clinical examination or at autopsy. Therefore, if in such cases the disease in both organs does not originate simultaneously and independently from each other, but in the form of a metastasis, the mode of metastasis is entirely unusual and rare." Reichel referred to seven cases of this kind in which the ovaries and uteri showed the picture of glandular carcinoma. Regarding the extreme rarity of secondary carcinoma of the ovary and the conspicuous size of the ovarian tumors, the primary seat of the disease had to be attributed to the ovary in five of his cases. In the remaining two the origin of the cancer could not be determined with certainty.

As far as the mode of metastasis was concerned, Reichel took the stand that the propagation of particles of the carcinoma might have taken place in the same manner in which the impregnated ovum reaches the uterine cavity—*i. e.*, by way of the tubes. Analogous cases are found in the literature of general surgery—for instance, cases of primary gastric cancer with secondary deposits in lower parts of the intestines; furthermore, cases of multiple carcinoma of the rectum.

Reichel was not surprised to find the tubes in a perfectly normal condition, even though they had served as canals for the propagation of the disease, as it was the general belief at his time that only in extremely rare instances the tubes are to be found involved by primary or secondary cancer. This view, of course, cannot be maintained at the present time, inasmuch as the number of records of carcinoma of the tubes is growing every day. Cases of this kind have been reported by Orthmann,²⁰ Saenger,²⁸ Alban Doran,⁴ Knauer,¹⁵ Fischel,⁸ Roberts,²⁵ Routier,²⁷ Westermarck and Quensel,³⁴ Cullingworth,³ Hofbauer,¹³ Falk,⁶ Zweifel,³⁷ von Rosthorn,²⁶ Osterloh,²¹ Fabricius,⁵ Wynter,³⁶ Fearne⁷ and others.

Yet, we must believe in this way of the establishment of metastases, in Reichel's cases, until we find a better explanation for the integrity of the tubes.

In his seven cases the carcinoma of the ovary was combined with a carcinoma of the body of the uterus. This coincidence induced Reichel to the wrong conclusion that in regard to carcinomatous degeneration there is a certain relationship between the ovary and the body, but not the cervix or vaginal portion of the uterus. Other publications, however, will show us that this coincidence is merely accidental.

Further reports of a few cases of simultaneous cancers of uterus and ovaries are brought forth by Leopold,¹⁶ but it is not stated by him whether the metastatic new-growth in the uterus was limited to the mucosa or not. Leopold emphasizes the fact that in most cases of carcinoma or sarcoma of one or both ovaries, the rest of the genital organs remains perfectly normal and without the slightest changes. Speaking of the complications and metastases of ovarian

carcinomata in general, he states that the unilateral cancers remain solitary for a long time and but very seldom involve the other sexual organs. The bilateral ovarian cancers produce, as a rule, severe complications, but they rarely advance upon the rest of the genital organs.

H. W. Freund¹⁰ found the peritoneum to be involved in a large number of carcinomata of the ovary, but does not mention that the uterus or tubes were afflicted.

Lerch¹⁷ has examined twenty-two cases of primary carcinoma of the ovary. Out of this number in but five cases were metastases found in either the uterus or tubes. It is, however, not stated clearly whether the secondary growth was located in the epithelial stratum of these organs.

In Olshausen's¹⁹ case, a bilateral malignant ovarian tumor was combined with an epithelioma of the tube, the uterus being perfectly normal.

Hofmeier¹⁴ mentions two cases pertaining to the subject in hand. In the first case a carcinomatous ovarian tumor was removed by laparotomy. Six months afterwards an adenocarcinoma of the uterus became manifest in the same patient. In the second case there co-existed a cancer of the body of the uterus, a malignant ovarian tumor and a pyosalpinx.

Loehlein³⁸ demonstrated a case of primary carcinoma of the body of the uterus with simultaneous carcinoma of both ovaries.

Also in Gottschalk's³³ case a primary carcinoma of the body of the uterus has produced metastases in the ovaries.

Similar observations are published by Meyer,¹⁸ Verstraete³² and Wehmer.³¹

It may be noted that in the cases in literature so far recorded, the growth of the carcinoma has not extended over a very large portion of the epithelial stratum of the genital tract. The following instance, published by Gebhard,¹¹ tells us of the carcinomatous degeneration of the greater part of this epithelial stratum. In this case there was found a degenerated papilloma of the ovary, together with metastases in both the tubes and the cervix uteri. The ovarian tumor consists partly of small cysts filled with a thick yellowish fluid, partly of solid portions of extraordinary softness. On microscopic examination the latter shows the picture of papillary carcinoma. The abdominal end of the tube is firmly adherent to the tumor. The outer third of the tube is somewhat dilated. From its mucosa there project numerous carcinomatous papillary outgrowths. The mucosa of the body of the uterus is smooth and a little thickened, but otherwise perfectly normal. The whole cervical canal and even a part of the vaginal portion is lined with villous excrescences. These under the microscope are found to be of adenomatous structure, which shows a decided increase of glands in all stages of carcinomatous degeneration.

To return to my own cases, the question arises which of the carcinomata is the primary one. In regard to this question, it may be said that in Case II. the carcinoma is located primarily in the uterus, that in the tube being secondary. This fact is brought forth from the larger extension of the new-growth in the uterine and cervical cavity. Here the carcinoma evidently exists for a longer time than that in the tube. I refer to Cullen,² who says (p. 354): "It sometimes happens that in the very earliest stages the whole mucosa (of the uterus) is found to be involved, development apparently taking place simultaneously in all parts of the cavity."

In this case the carcinoma was not transported in the usual mode, through



FIG. I.

Del. Paula Cuenther, Berlin.

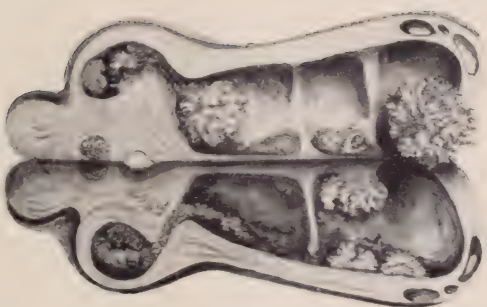


FIG. II.

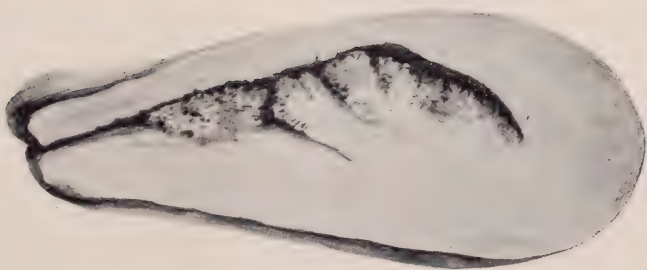


FIG. III.



the lymphatic vessels, but advancement took place *per continuitatem* in the epithelial stratum. In this respect, Bland Sutton³⁰ says: "Cancer of the body of the uterus extends along the mucous membrane and invades the tubes. This I have seen on a few occasions . . . but extension of uterine cancer in this direction is the exception rather than the rule."

In Case I., which requires the greater interest because of the conspicuous extension of the disease, it is beyond question that the carcinoma has appeared first in the ovaries. It is well known how often papillomata of the ovaries undergo carcinomatous degeneration. According to the researches of Pfannenstiel,^{22 23} about one-half of all papillomatous ovarian cysts are carcinomatous. Moreover, the ovary in itself is especially inclined to primary carcinomatous degeneration (Gebhard¹²). Again, secondary cancer of the ovaries is rare (Birch-Hirschfeld¹).

Winckel³⁵ also asserts that a secondary carcinoma of the ovary is of extreme rarity. He himself has found only two cases of this kind, and attributes this rarity to the well-known curious rule that organs which are frequently the seat of primary cancer are rarely the seat of secondary deposits, and *vice versa*.

Cullen, in his classical work on cancer of the uterus, draws from his own investigations the conclusion that in operable cases of carcinoma of the cervix (pp. 155 and 327) and of the body of the uterus (p. 437) involvement of the appendages, especially of the ovary, is rare.

The opinions on the frequency of secondary cancers of the ovary differ greatly, but after a careful study of the literature pertaining to this subject, I cannot agree with Bland Sutton, who says (*l. c.*, p. 76) "that in the majority of instances cancer of the ovary is secondary."

According to Birch-Hirschfeld (*l. c.*), it also seldom happens that the ovaries are affected with cancer by direct extension from adjoining organs; and I may add, that there is not yet a single case recorded in which the carcinoma of the uterus has extended through the tubes to the ovaries.

Finally, the clinical aspect in Case I. is of importance. The disease of the ovaries dominated the clinical symptoms. The patient when first seen stated that she observed an enlargement of her abdomen, and complained of severe pains, which started about four weeks ago. On examination, a bilateral ovarian cyst was found. Since we have to suppose that these cysts were of far older, but unrecognized standing, we may be justified in presuming that the pains started when the growth of the cystic tumors increased in rapidity. Most probably the onset of pains, then, marks the time when the tumors began to undergo carcinomatous degeneration.

The characteristic changes in the ovaries are, macroscopically and microscopically, much more significant than in the other diseased organs. We have seen that in the ovary there exists a fully-developed adenocarcinoma. The carcinoma in the tubes shows a more marked development in the lateral third than in the uterine portion. That in the uterus is apparently much younger. Here it is just passing through the preliminary stage of a malignant adenoma, and has developed a real adenocarcinoma only in certain parts of the mucosa. Taking all these points together, we arrive at the conclusion that in our case the carcinoma was primarily seated in the ovaries.

I am well acquainted with the fact, which has been emphasized by a number of trustworthy and accurate observers, that sometimes the secondary cancer may

grow much more rapidly than the primary one, but there is no evidence for a supposition of this kind in the case in hand.

There is but one more possibility, namely: that the tubes were the primary location of the carcinoma. Such a case, however, would be unprecedented. That primary cancers of the tubes can produce metastases in the ovaries or the uterus has been demonstrated by Saenger and Barth,³⁹ and but recently von Franqué⁹ has collected seven cases of tubal cancer with secondary deposits in the mucosa of the uterus. But metastatic formations from primary cancers of the tubes are too rare to be seriously taken into consideration.

The mode of propagation in this case (I.) has not been the usual one. The progress of the disease can be traced very distinctly in our specimens. From the ovaries the neoplasm has extended first to the tubes. But it is inexplicable how this happened. No matter what the nature of carcinoma may be—whether parasitic or otherwise—we must expect that the walls of the ovaries must be perforated in some place in order that particles of the carcinoma can be implanted on the fimbriated end. I did not, however, succeed in finding such a perforation, either when carefully inspecting the walls of the ovaries with a magnifying glass or when examining every suspicious or even somewhat thinner portion of the walls under the microscope.

Therefore we must refrain from giving an explanation as to how the carcinoma has extended beyond the bounds of its primary seat, but from then on we can trace it on its way with the greatest certainty. Starting from the fimbriae it crept along the inside of the tubes, and finally invaded the uterus. In the latter it preferred the anterior wall for reasons which we cannot explain; it passed over the internal os, and only stopped in the cervical canal at the line where the cylindrical epithelium of the cervix and the squamous epithelium of the vaginal portion are in contiguity. This limit, as is well known, is rather indeterminate, as in senile uteri the squamous epithelium may reach above the external os, and is even occasionally found near the internal os.

The posterior surface of the uterine cavity has also been affected. The dissemination of small nodules upon otherwise normal mucous membrane, as described, suggests the idea that here the implantation has taken place by *direct contact*—a comparatively rare way of contamination.

It is noteworthy that in our patient both ovaries have undergone a primary carcinomatous degeneration at the same time. From the ovaries the carcinoma passed over to the tubes, either simultaneously or at least after a short interval, and from both tubes the cancer has—again simultaneously—invaded the uterus.

From the foregoing it is evident that Case I. most clearly illustrates the mode of extension of carcinosis of the internal genital organs and what the final outcome may be. I have not been able to find an equally instructive case in literature.

These cases of carcinosis are not only interesting to the pathologist, but are also important and valuable from a practical standpoint. Reichel has already drawn the correct conclusion from his observations that, in case of carcinoma of the ovary, the uterus also ought to be removed, and *vice versa*. I unreservedly agree with this postulate, the rationality of which has been once more demonstrated in my own cases. I believe it ought to be accepted as a rule, that in all cases of carcinoma of the internal genital organs, even if the disease seems to be limited to only one of these organs, total extirpation should be performed, pro-

vided the condition of the patient permits this radical procedure. It is utterly out of place to impair the chances of a complete recovery by preserving the ovaries in the idea of avoiding the disturbances of an artificial menopause.

[3419 Lucas avenue.]

BIBLIOGRAPHY.

1. Birch-Hirschfeld, Lehrbuch der path. Anatomie, vol. ii., p. 913.
2. T. S. Cullen, Cancer of the Uterus, 1900.
3. Cullingworth, Primary Cancer of the Fallopian Tubes. Trans. Obstr. Society, London, 1896, vol. xxxvi., p. 307.
4. Alban Doran, Primary Cancer of the Fallop. Tubes. Trans. Path. Soc., London, vol. xxxix., p. 208.
5. I. Fabricius, Beitr. zur Casuist. der Tubencarcinome. Wien. klin. Wochenschr., 1899, No. 49, p. 1230.
6. E. Falk, Fall von Tubencarcinom. Verh. Berliner med. Gesellschaft, March 11, 1900, p. 93.
7. Fearnle, Primaeres Tubencarcinom. Arbeit. Frauenklinik, Dresden, vol. ii., p. 337.
8. W. Fischel, Ueber einem Fall von primaerem papillaerem Krebs der Muttertrompete. Zeitschr. f. Heilkunde, vol. xvi., No. 2.
9. O. v. Franque, Verh. d. deutsch. Gesellsch. f. Gynaec., Giessen, 1901.
10. H. W. Freund, Haeufigkeit d. boesartigen Eierstocksgeschwuelste. Arch. f. Gynaec., vol. xxxiii.
11. K. Gebhard, Verh. Gesellsch. Geb. und Gyn., Berlin, May 29, 1891.
12. K. Gebhard, Pathologische Anatomie d. weibl. Sexualorgane, 1899, p. 363.
13. Hofbauer, Primaere Tubencarcinome. Arch. f. Gyn., vol. lv., p. 316.
14. M. Hofmeier, Anatomie und Therapie d. Carc. corp. uter. Zeitschr. f. Geb. u. Gyn., vol. xxxii.
15. E. Knauer, Fall v. prim. papill. Carcinom d. Muttertrompete. Centralbl. f. Gyn., 1895, No. 21.
16. G. Leopold, Solide Eierstocksgeschwuelste. Arch. f. Gyn., vol. vi.
17. Lereh, Beitr. z. Kenntnis der Carcinome d. Ovar. Arch. f. Gyn., vol. xxxiv., p. 442.
18. W. Meyer, Carcinom d. Uterus u. d. Ovarien. Inaug. Dissert., Kiel, 1896.
19. R. Olshausen, Quoted from Orthmann.
20. G. Orthmann, Ueber Carcinoma tubae. Zeitschr. f. Geb. u. Gyn., vol. xv.
21. Osterloh, Tubencarcinom. Central. f. Gyn., 1897, p. 809.
22. J. Pfannenstiel, Ueber die Malignitaet d. papillaer. Ovarialgeschw. Verh. d. deutsch. Gesellsch. f. Gyn., Breslau, 1893.
23. J. Pfannenstiel, Ueber die papillaeren Geschwuelste d. Eierstockes. Arch. f. Gyn., vol. xlviii., p. 504.
24. P. Reichel, Ueber das gleichzeitige Vorkommen von Carcinom des Uteruskoerpers und des Eierstockes. Zeitschr. f. Geb. u. Gyn., vol. xv.
25. C. H. Roberts, A Second Case of Primary Carcinoma of the Fallopian Tube. Trans. Obstetr. Soc., London, vol. lxi., p. 129.
26. v. Rosthorn, Primaeres medullares Carcinoma tubae. Zeitschr. f. Heilk., vol. xvii., p. 177.
27. Routier, Epitheliome primitif de la trompe. Annal. de Gyn., Paris, 1893, p. 39.
28. M. Saenger, Primaere Neubildungen der Tuben. Centralbl. f. Gyn., 1895, No. 52.
29. M. Saenger und I. Barth, in A. Martin's Krankheiten der Eileiter, p. 918.
30. I. Bland Sutton, Surgical Diseases of the Ovaries and Fallopian Tubes, 1891.
31. F. Wehmer, Gleichzeit. Vorkommen boesartiger Geschwuelste des Uterus und Ovarium. Inaug. Dissert., Wuertzburg, 1894.
32. Verstraete A., Nouvelle observation de fibrome uterin et de cancer du corps avec degenerescence secondaire des ovaires. Lille, 1900.
33. S. Gottschalk, Verh. Gesellsch. f. Geb. u. Gyn., Berlin, Jan. 26, 1900.
34. Westernmark-Quensel, Ett fall af dubbelsidig cancer i tuba Fallop. Nord. med. ark., 1892, No. 1, ref. Centralbl. f. Gyn., 1893.
35. F. von Winckel, Pathologie der weibl. Sexualorgane, pp. 111 and 114.
36. Wynter, Primary Carcinoma of the Right Fallop. Tube. Trans. Path. Soc., London, 1891.
37. P. Zweifel, Demonstr. eines primaeren Carc. e. Tube mit Ovarialeyste. Centralbl. f. Gyn., 1894, p. 661.
38. H. Loehlein, Carcinoma corporis uteri mit gleichzeitigem Carcinom beider Ovarien. Deutsche medic. Wochenschrift, 1889, p. 502.

SOME PHASES OF NEPHRO-LITHIASIS.*

BY A. H. CORDIER, M. D., of Kansas City, Missouri,

PRESIDENT MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

(WITH FOUR ILLUSTRATIONS.)

I assure you I feel that the words at my command are inadequate to express my appreciation and thanks for the honor you have conferred on me by selecting me for your chairman. It is an honor of which any one, I am sure, should feel proud. To preside over a society composed of the stars of the medical world is a function of much honor and mutual responsibility—the responsibility for a successful meeting not falling alone on the officers, but on each individual, as on your co-operation hangs the success of the meeting. I desire to express my thanks for the efforts of each member of the society; and to your worthy secretary, Dr. H. A. Juley, too much praise cannot be given for his untiring efforts and enthusiastic zeal in the arranging of the excellent program for our work.

* President's address delivered at Put-in-Bay, Ohio, September 12, 1901, before Mississippi Valley Medical Association.

The most difficult task to me, as your chairman, has been the writing of this address. I fully realize that the membership of this great society is made up of the representative hard-working and most scholarly gentlemen in the territory in which they reside. A recognition of this fact does not, I assure you, make the writing of an annual address more easy—far from it. I realize that each and every one present has, during the past year, kept himself thoroughly informed on the progress in the various departments of medicine and surgery; hence what I may say in this paper is merely the performance of a duty as prescribed by the by-laws of the association.

It is a pleasure to review the progress made in surgery by American physicians. The birthplace of most operative procedures is found within the domain of the United States, the originator, in many instances, having been at some time a member of this association. What an inheritance for operators of to-day! Review the list, and it is inspiring. We doff our hats in humble adoration to those who, by their labors, have smoothly paved the way and removed many stumbling-blocks of difficulty and uncertainty.

The supreme benefit of these annual meetings exists in the remembrance of the priceless works of those who attend and enter into these discussions.

The beneficent yield of the fruits of the labors of those who have gone before is gathered by us to-day, and a new crop sown, with cultures of modern technique as the fertilizer. The architects and pattern-makers of much of our work of to-day wrought long ago and have passed on their places being filled by others. The yoke is taken up by the younger generation at the point where it was laid aside by these pioneers. Sufficient traces of their noble designs have remained to show us that they must have been masters at the period in which they lived.

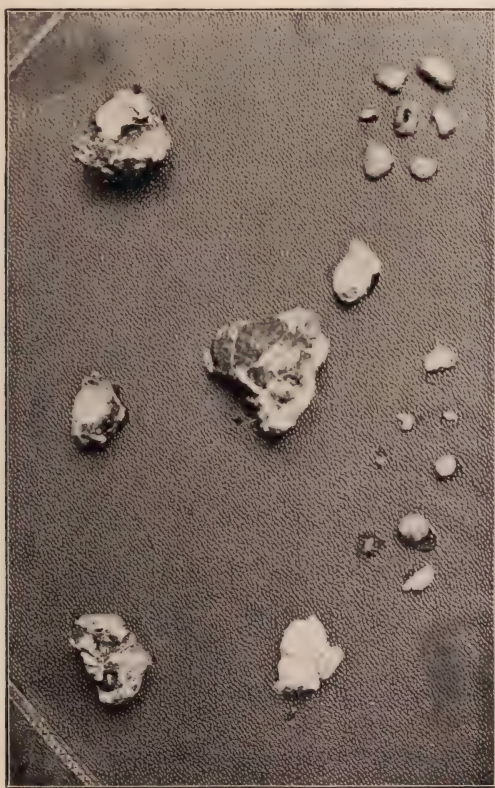
“Originality, after all, in most instances, is the ability to do better what has been done before.” Many, old and long since abandoned surgical procedures have been resurrected under new names, and made life-saving and comfort-giving methods by the skilled modern surgeon. While the foregoing statement is, in the main, true, yet as we reflect upon some of the abandoned ideas or practices of a few years ago, there comes a feeling of sad enlightenment, a sagacity that lays our errors bare, and leaves us without excuse in our own eyes. The adaptability of the human intellect in the selection of the good and worthy, and the just rejection of the harmful and useless, is no better amplified than in the noble profession to which we have the honor to belong. It is true that too many modifications of ideal surgical procedures have been placed before our profession by overzealous members, but when tried and found wanting, they have been quickly rejected and thrown into the rubbish heap, to remain there unless resurrected by some one who has not kept abreast of the times, and who knows not the history of their birth, life and death.

Life is a leaf of paper white,
Whereon each one of us may write
His word or two, and then comes night.

We owe our predecessors a debt of gratitude which we can only pay in installments, by accepting their good precepts and following them, or improving them if possible. The great work of our faithful and skilled predecessors would soon become a lost art, and the wheel of scientific progress cease to turn for-

ward, were it not for the labors of the members of our profession who are not content to idly look on at the suicide of the created works and results of the past masters of our art. "Perpetual work is the law of art, as it is the law of life."

Expansion in surgical procedures is not an untried venture with the United States surgeons. The surgery of to-day is certainly an illustration of the fact that pioneers are still working on the surgical frontier. Pathological territory that was unknown a few years ago has been carefully located, surveyed, colonized and taken possession of by the modern pathologist and surgeon. Hemorrhage from incised parenchymatous organs had long been dreaded, and had thus stayed the progress of surgery in these organs for years. When it was demonstrated



SMALL NEPHRITIC CALCULI.

that in most instances this fear was an ungrounded apprehension, the surgery of such organs took its position in the front rank of legitimate and justifiable procedures. This rapid stride has been nowhere noticed more than in the surgery of the kidney, and this event marks one of the notable epochs in surgical history. With the disappearance of timidity on the part of operators, a brilliancy in surgical procedures and results was born that has not been excelled in any other department of surgery.

The surgery of life-essential organs should always, when possible, be prophylactic in its aims. The original pathology should be removed early, thereby preventing the destruction of the function of the organ involved. This means

early diagnosis and quick surgery in all surgical diseases of that organ. In no organ does that axiom apply with more emphasis than to the kidney.

Lumbago, dorsal neuralgias, perinephritic abscesses and sprained backs are far less numerous, and nephritic calculi more frequent since surgery has invaded this locality and proved the true source of these manifested symptoms of a stone, long remaining in the kidney. Persistent urinary fistula will become less prevalent even than to-day, following a nephrotomy, as the diagnosis is made earlier and surgery resorted to sooner.

A wound in a healthy kidney will heal as readily as in any other structure. Recognizing the importance of an early prophylactic operation and the certainty of an early union of the kidney wound, the surgeon of to-day is warranted in resorting to an exploratory nephrotomy when in doubt as to the presence or absence of a nephritic calculus.

Pyonephrosis and hydronephrosis are late manifestations of stone in the kidney, and should not be permitted to occur when the diagnosis is made early in the case. I realize that this is ideal surgery, and cannot be attained in all cases.

The presence of a stone in the kidney is ever a menace to life, and a source of danger to the functional integrity of the kidney affected, and even to the opposite kidney through sympathy, as has often been the case where a calculus anuria has developed when only one kidney was the harbinger of the calculi.

That a stone may form in the kidney at any age has been long known, and that the composition of the stones, as a rule, varies according to the age of the patients, the rule being that this composition is urate of ammonium in children, uric acid in adults, and phosphate or oxalate of lime in patients past forty. The stones may vary in numbers from one to one hundred or more, the size varying from mere grains to several ounces, and the shape varying according to the size and location, and also the chemical composition of the calculus. One of my specimens weighs over three ounces, and is the exact shape as was the dilated pelvis and calices. This was a phosphatic stone.

These calculi may form in either kidney or both at the same time, yet my experience has been confined entirely to stones occurring in the right kidney. Why the right kidney should be selected, no one, so far as I know, has up to this time been able to explain satisfactorily. There are a number of accepted reasons for the displacement of the right kidney in so-called movable kidney. I am firmly of the opinion that some of the conditions existing as a result of this displacement have much to do with the formation of stones, yet I do not believe that this is the only causative factor. The ascending colon, with its ever-present myriads of colon bacilli, and its distended condition resulting from gases and fæces moving against the forces of gravity, produce a pressure on the right kidney and ureter that results in an impediment to the free flow of the urine. This, added to a possible partial bend in the ureter, from a kidney displacement, would produce an ideal condition for urinary sedimentation in the pelvis of the kidney. The colon bacillus has been found so frequently in the pelvis of the kidney in stone cases as to warrant giving to this bacillus some credit for the infection found at the time of the removal; and I believe that its presence here is a factor in the production of the calculi. Extensive suppurative processes in the kidney in the presence of a stone are late developments.

These stones are not formed in a few weeks, but many months and even years may be occupied in making a stone of any magnitude, yet a phosphatic calculus

may form very rapidly. A stone having formed to a size too large to pass through the ureter, will continue to enlarge until its presence brings about a train of symptoms pointing to an involvement of the kidney proper. If the stone is small enough to pass through the ureter without any resistance, its passage may not be discovered. It may escape through the urethra, or, remaining in the bladder, act as a nucleus for a cystic calculus. If the stone is small enough to become engaged in the ureter, and too large to readily go through, it then gives rise to a train of symptoms, the main feature of which is a most intense pain in the back and along the course of the ureter, with retraction of the testicle, irritable bladder and transient anuria followed by a polyuria and blood in the urine after the affected ureter is again opened. With this set of symptoms all are familiar. It is the case which does not present the typical symptoms that we, as surgeons and practitioners, wish to study, as upon a correct understanding of



CASE I.

these atypical cases depends the relief of the suffering and the saving of the kidney.

In cases where the stone does not make its exit from pelvis into ureter, but remains in the kidney, a group of symptoms is presented almost characteristic of this condition. A prior history of nephritic colic is usually obtainable; then a quiescent period, extending over several weeks, months, or possibly years; then a recurrence of the colic spells, or a history of repeated attacks of hæmaturia may be obtained, the hemorrhage and pain being provoked by exercise, riding over a rough road on horseback or in a vehicle. It has been my experience that the cases having hæmaturia most often are freest from intense colic. This is due to the stone being irregular and rough, yet too large to become engaged in the pelvis or ureter. While these cases have pain, it is confined to the region of the kidney, and rarely extends down the ureter.

In these cases the pain is never so severe as that caused by the ureteral stone. There may be a large and rectangular stone, and at the same time a "ball-valve" ureteral stone. This would be disposed to mislead at the time of operation. A carefully gleaned clinical history will usually point to the correct condition and location of the stone or stones.

A large or small stone in the pelvis of the kidney, which intermittently blocks the ureter, will give rise to a pyonephrosis or a hydronephrosis, transient in character, the constitutional manifestations depending upon the presence of infection in one, and the absence of infection in the other.

If an extensive infection of the pelvis is present, the characteristic enlargement will take place at the site of the kidney, and if the ureter is more or less patent, an abundance of pus will be detected in the urine. Many of these cases of calculous pyuria will give rise to a persistent cystitis as the dominant symptom, and bladder washing will often be resorted to without avail. A large or small stone in the kidney, when accompanied by infection, is a constant menace to the functionary safety of the kidney. In arriving at a diagnosis of a nephrolithiasis with infection of an enlarged kidney, gall-stone colic must be eliminated. This is done by the usual symptoms of a cholelithiasis, and their absence or presence.

Where there is suppuration and a large stone, the diagnosis is easy. While it is desirable to diagnose these cases, our efforts should be expended in the direction of preventing the formation of these large stones, thereby warding off the late destructive processes in the kidney brought about by permitting these stones to remain until this suppurative process occurs. A history of previous renal colic, even though long ago, the presence of lumbar pains on one side (when crystals of uric acid and oxalate of lime are frequently found), tenderness over the kidney, recurrent hæmaturia, irritable bladder or pain and hæmaturia increased by exercise, etc., is sufficient to warrant a diagnosis, or an approach to the same, justifying an exploratory incision. This procedure is a safe one, and no harm will result from it in skilled hands. Many other conditions, giving rise to pain, etc., may be relieved by this operative procedure.

A number of other conditions of the kidney and ureter give rise to symptoms simulating stone. These are often relieved by this so-called exploratory incision. It must be remembered that a calculus may exist in the kidney without giving rise to any symptoms. X-ray examinations will show the presence of large calculi, but a failure to find a stone by this method should not deter the surgeon from exploring for it when symptoms point strongly to its presence. A kidney stone that fails to pass through the ureter, and assumes a quiescent state, is a dangerous tenant and should be removed.

CASE I.—Mrs. B., right kidney. Twenty years ago she passed the first calculus from the right kidney. This stone was the size of a small mulberry. She had passed considerable "sand" for some months prior to the passage of the first stone. This stone was seven weeks passing, causing intense pain. She had a comparative freedom from pain for twelve years, then passed a second stone, not so large as the first, but which caused much pain during its passage. After this attack she passed a great deal of "sand." She continued having attacks of renal colic at the rate of two or three a year, passing stones with each attack. These stones were irregular in size and shape. Three weeks ago she passed three small stones.

She has not had much pain in the back. The pain has been in front, over the kidney and down along the course of the ureter and distribution of ilio-inguinal and genito-crural nerves. During the passage of the stones the bladder has been irritable. All told, she has passed from the kidney thirty or forty stones. Six months ago she had an attack of renal colic, and the urine became scanty and very cloudy, and blood was noticed. She has never had a hemorrhage from the kidney. During the last six months she has never been free from pain, and in this time she has passed seven calculi. Five weeks before entering the hospital the kidney became perceptibly enlarged and very tender to touch. She had fever and sweats. The urine was loaded with pus, and diminished in quantity. Examination revealed the kidney enlarged, tender and displaced downward. The patient was much emaciated.

Operation, retro-peritoneal incision. Kidney incised on posterior surface, a large amount of pus escaping. On introducing the finger into the kidney I found a mass of calculi wedged into the pelvis and calices, the stones, eight in



CASE II.

number, varying in size from 300 grains to the size of a pea, and composed of phosphate of lime. The kidney was irrigated, and a drainage tube inserted, and gauze packed into the kidney to control the hemorrhage. This kidney was making considerable urine. This case is still under observation in the hospital. She is much improved in weight and appearance. The ureter is open, and her progress toward recovery is all that could be desired.

This lady presented herself to me three years ago, and I made a diagnosis of stone in the kidney and placed her in the hospital for operation, but she left, refusing to undergo the operation.

CASE II.—Mrs. P., aged thirty-six. Several years ago this lady had one attack of right nephritic colic, lasting two or three days. The stone did not pass; or, at least, she failed to detect it. Since then, up to the time of operation, she had a vague sense of uneasiness in the region of the right kidney.

A year before she came under my care she began having a cystitis, and was treated for it by local methods, in the way of irrigations of the bladder, etc.

This course of treatment failed to bring her any relief of the bladder symptoms. The cystitis was of kidney origin. There was no history of hæmaturia or anuria.

Examination elicited tenderness over the enlarged kidney. The organ was displaced downward, and fixed by perinephritic inflammatory agglutination. The usual lumbar incision, post-peritoneal. Kidney incised, and a large calculus of oxalate of lime removed, weighing 1,428 grains. The kidney was drained by a tube. Ureter patent, as fluids and blood passed into the bladder at the time of operation. This kidney was saved, as it was making a large amount of urine.

CASE III.—Mrs. F., aged forty-two. Twenty-five years ago this lady had an attack of right renal colic, and passed a small calculus. She was free from pain for a number of years, when she again had an attack of renal pain, but failed to pass the stone. For years after this she continued to have attacks of pain in the



CASE III.

region of the right kidney. There was no blood in the urine at any time. The pain was never, in any of the subsequent attacks, so severe as in the first. She became practically an invalid ten years ago, and has remained so ever since. A secondary cystitis developed a year ago, and much pus was noticed in the urine. She became septic, and a perceptible enlargement of the kidney developed. This was nodular, fixed and tender to the touch.

The usual post-peritoneal incision was made and the kidney opened, and a stone weighing 1,540 grains was removed. Gauze and tubular drainage were employed. A large amount of pus was present. The ureter was not opened freely, yet I felt that there was no calculus obstruction, as large quantities of pus had been passing into the bladder from the right kidney.

This kidney was making fully a pint of urine in twenty-four hours. The patient is still in the hospital, but her improvement has been remarkable.

DEDUCTIONS.—1. Hemorrhage from parenchymatous organs is, in most instances, easily controlled.

2. Nephro-lithiasis is more prevalent than is generally supposed.

3. A stone having formed in the pelvis of the kidney, if too large to pass through the ureter, will sooner or later produce symptoms demanding its removal.

4. Suppuration, in stone cases, is, as a rule, a late process, and should be prevented by early surgical treatment.

5. A wound in a healthy kidney heals rapidly.

6. Obscure, persistent pains in the region of the kidneys, in a patient who has had a renal colic years ago, should lead to an exploration of the kidney.

7. The operation of nephro-lithotomy has a very low mortality.

8. The kidney should not be removed unless practically destroyed by the disease.

9. There exists a special cause for the development of stones in the right kidney.

10. With a carefully obtained clinical history, the diagnosis of stone in the kidney is usually easy.

11. At the time of operating the ureter should be explored, that its patency can be assured.

12. Post-operative patience and faithful effort on the part of the surgeon will result in the saving of many organs; otherwise removal will be necessary.

A CASE OF OSTEOMA OF THE ORBITAL PLATE OF THE FRONTAL BONE, BRAIN ABSCESS AND THROMBOSIS OF THE CAVERNOUS SINUS.

By J. W. CHARLES, M. D.,

AND

M. B. CLOPTON, M. D.

The following case is of interest, not only on account of the comparative infrequency of thrombosis of the cavernous sinus, but also on account of the pathologic conditions which were suspected during the course of the malady and verified by the autopsy.

On the morning of March 4, 1901, L. K., an attendant at the St. Louis Insane Asylum, presented himself with the following history: Yesterday morning he awoke with an intense frontal headache. The left eye was red and the lids were slightly swollen. Previous ocular history was negative. He had suffered from occasional headaches, but never of an excruciating character.

Status Præsens.—*Left Eye*.—Lids œdematous and very tense, so much so that they can hardly be separated sufficiently to expose the globe; conjunctiva bulbi chemotic; cornea and iris normal; anterior chamber of normal depth; pupillary light reflexes normal; globe almost completely immobile. The patient complains of extreme pain upon attempting to turn the eye in any direction. Pain not increased by gentle palpation, except at outer end of upper lid, where slight fluctuation could be detected. On account of patient's great suffering, vision was not taken.

Diagnosis.—Orbital phlegmon, probably resulting from a perforation of an empyema of the frontal sinus or ethmoidal cells.

Upon plunging a v. Graefe cataract knife through the upper lid, close under the outer end of the eyebrow, downward and inward, there was released a drop of pus, followed by a considerable amount of dark venous blood; this effected a partial relief of the tension and pain.

The patient was then referred to Dr. Greenfield Sluder for examination of his nose. Dr. Sluder was unable to determine a nasal origin for the condition, but he at once noticed a certain mental torpor.

Calomel, gr. $\frac{1}{4}$ ter die, and phenalgin, grs. v, every hour pro re nata, were then prescribed and locally iced compresses. Late in the evening the patient was admitted to St. Luke's Hospital. Temperature 101°, pulse 100, respiration 24. Bowels moved freely.

March 5th.—6 A. M., temperature 100.2°, pulse 80, respiration 20. Slept well. Complaints of pain in the head. Liquid diet was prescribed. 10:30 A. M., temperature 102°, pulse 80, respiration 20. Made puncture at inner end of upper lid downward and outward into orbit, finding no pus but releasing a quantity of venous blood, and giving patient some relief. Ophthalmoscopic examination showed veins dilated and slightly tortuous; no œdema of retina or of optic nerve. Vision—counted fingers at twenty feet. 12:30 P. M., temperature 102°, pulse 78, respiration 22. 3 P. M., patient had a mild epileptiform attack lasting ten minutes. 4:45 P. M., temperature 102°, pulse 90, respiration 24. Ice-cap applied to forehead and back of neck, on account of severe pain. 12 P. M., temperature 103°, pulse 84, respiration 24.

March 6th.—6 A. M., temperature 102°, pulse 100. Slept very well. Referred patient to Dr. H. G. Mudd, to whom we are indebted for permission to use these notes. 11 A. M., temperature 102°, pulse 86. Under general anæsthesia Dr. Mudd made an incision through the upper lid parallel with the eyebrow. Through this opening the orbit was carefully explored; apart from a marked venous congestion the finding was negative. In consultation with Dr. F. R. Fry the probable diagnosis of thrombosis of the cavernous sinus was agreed upon, and the patient was returned to the ward. 3 P. M., temperature 103°, pulse 100, respiration 44. Pulse very irregular. Twitching in limbs. Was given calomel and bicarbonate of soda, aa gr. v. 5 P. M., temperature 102.4°, pulse 118, respiration 40. \mathcal{R} Magnes. sulph., satur. sol., \mathfrak{z} ss. 8 P. M., temperature 102.2°, pulse 96, respiration 28.

March 7th.—1 A. M., temperature 102.8°, pulse 76, respiration 20. Severe headache. 7 A. M., temperature 103.2°, pulse 78, respiration 24. Slept little. Ice-cap applied. Patient was delirious most of the night. Now very nervous. 9:20 A. M., \mathcal{R} Natri. bromid., grs. xx, every two hours. 1 P. M., temperature 102.4°, pulse 70, respiration 24. 4 P. M., temperature 103.4°, pulse 76, respiration 26. Vomited. 8 P. M., milk given was vomited immediately. Patient is very restless. 10:30 P. M., vomited. 11 P. M., temperature 105°, pulse 112, respiration 44. Delirious.

March 8th.—12:30 A. M., temperature 104.2°, pulse 92, respiration 30. Milk vomited immediately. Eye discharging mucus. Pain in right side of neck. 3:30 A. M., temperature 104.6°, pulse 92, respiration 28. 6:30 A. M., temperature 105°, pulse 100, respiration 32. 9:30 A. M., temperature (ax.) 105°, pulse 108, respiration 46. 11:30 A. M., temperature 105°, pulse 110, respiration 46. 2:30

P. M., temperature 105.8° , pulse 120, respiration 48. Involuntary defecation. 5:30 P. M., temperature 106.2° , pulse 130, respiration 52. 7 P. M., hiccoughs. 8 P. M., temperature 106.7° , pulse 132, respiration 54. 11:30 P. M., temperature 107.6° , pulse 160, respiration 60.

March 9th.—1 A. M., temperature 107° , pulse 160, respiration 78. 1:50 A. M., vomited. 2 A. M., died.

Autopsy, March 10th.—Only the brain and the cranium were examined. Beneath the dura, over both parietal regions, was a tenacious fibrous exudate, which also extended over the left frontal lobe. The right side of the base and the posterior half of the left side were free from exudate. The base of the left frontal lobe and the adjacent fissures were covered with a fibro-purulent discharge, and the frontal lobe was the seat of an abscess about the size of a walnut. The contents of the abscess were purulent and bloody, and were contained by a grayish-black membrane, which merged into the much injected brain tissue that surrounded it. The abscess did not connect with the subdural space, but was separated from it by 1 cm. at its nearest approach. At the corresponding point on the orbital plate of the frontal bone, protruded a smooth nodular exostosis, 1.5 cm. in height and 2 cm. in diameter at its base. This pressed into the frontal lobe directly beneath the abscess, and was covered with a fibrous bloody exudate. The orbital plate, when chiseled loose, opened into an empyema of the frontal cells, the osteoma presenting almost as much on the under surface of the orbital plate as it had above.

The left cavernous sinus was thrombosed for its entire course. Cover-slips from the meningeal exudate showed no organisms. Cultures were not made. Sections of the exostosis showed a simple osteoma.

After the patient's death his associates admitted that for several months he had had slight epileptiform attacks, but we were never able to elicit from him any previous history except that of occasional frontal headaches.

Naturally an operation for cleaning out the thrombus could not be considered in view of the cerebral and meningeal symptoms. This procedure is admissible only in a case of a simple thrombus, where the danger of extension to the cavernous sinus of the other side through the circular sinus (thereby causing blindness of the other eye) is imminent.*

* Knapp (Trans. Am. Ophth. Soc., 1900) has reported the successful removal of a "traumatic non-infective" thrombus of the cavernous sinus in which the second eye had begun to exhibit marked signs of venous congestion.

EDITORIAL COMMENT.

EDITED BY

WILLARD BARTLETT, M. D.

JESSE S. MYER, M. D.

WALTER BAUMGARTEN, M. D.

WARREN B. OUTTEN, M. D.

HUGO EHRENFEST, M. D.

WILLIAM PORTER, M. D.

MARTIN F. ENGMAN, M. D.

WILLIAM E. SAUER, M. D.

R. B. H. GRADWOHL, M. D.

SIDNEY I. SCHWAB, M. D.

JOHN GREEN, JR., M. D.

JOHN ZAHORSKY, M. D.

H. McC. JOHNSON, M. D.

OTHO F. BALL, M. D. Managing Editor.

COLLABORATORS:

MAX MICHAELIS, M. D.,

Docent of Internal Medicine, University of Berlin, Germany.

JULIUS NEUMANN, M. D.,

Docent of Obstetrics and Gynecology, University of Vienna, Austria

JULIUS SCHNITZLER, M. D.,

Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

HEINZ WOHLGEMUTH, M. D.,

Berlin, Germany.

Address all communications to the INTERSTATE MEDICAL JOURNAL, COMMERCIAL BUILDING, ST. LOUIS, MO.

RUDOLF VIRCHOW.

Eighty years ago on the 13th day of October there was born in a little Pomeranian town, Schiefelbein by name, the one whom we delight to honor by the title "Father of modern medicine." The German students used to tell a little story of the master's childhood which, if it be true, has come far from realizing its fulfillment. While Virchow attended the primary school in his native village he was, it is said, known for his lack of the brilliant qualities which characterized him in youth and manhood; so when it came to the end of one term, the teacher, after dismissing his other pupils with various words of advice and admonition, sent the future great man of medicine out to enjoy his vacation with this despairing farewell: "For the others there is some hope, but Rudolf, what in the world are we going to make out of you?"

How ill-advised the German schoolmaster must have considered his remark if he learned later of the epoch-making discoveries made at Berlin and Wuertzburg by the pupil who had caused his despair of earlier days! As assistant in pathology at Berlin he produced, between 1843 and 1850, "Plugging of the pulmonary artery and its results," "The pathological pigments," "Leukæmia," and a host of other evidences of the birth of a new and rational system of pathological investigation; the day of the myths which made up the humoral pathology and the solidar pathology had passed.

But he did not approach the zenith of his glory until 1854, when science awoke at the touch of his transcendent genius to a realization of the truths of the cellular pathology.

And so from that time to this he has gone on as student, editor and teacher, till now he stands without a rival in the field of medical science, to say nothing of the many others in which he has made his energy and influence felt.

May Rudolf Virchow long continue in the work whose results have meant so much to humanity; may the master long continue to guide us and inspire us with his presence. Then when at last he must lay down the burden, all will unite in blessing him who shall have done more than any other single individual to advance the noblest of all the arts.

COMPULSORY STUDY OF THE SPECIAL BRANCHES—ITS EFFECT.

The assertion has been made that the field of the specialist is gradually becoming more and more limited, and that finally the work now done by him will be done by the general practitioner. This we have reason to doubt. The general practitioner should be a general diagnostician. If equipped with suitable instruments, skillful by reason of experience or particular adaptability, and if he have time, there is no reason why he should not treat his patient, no matter what the lesion. We cannot, however, have much faith in the "Universal Specialist." Certainly we would not trust the removal of a cataract from our own eye to a general practitioner, if the services of an ophthalmic specialist were available, nor a tumor of the vocal chord by the unpracticed hand.

We know that in the use of instruments of precision we can only by long and patient training become proficient in their manipulation; and even then finer technique is soon lost unless the practice be continued.

It cannot be denied that, in these days when there is so much advancement made in all branches of medicine, it would be impossible for the busy practitioner to even keep in touch with this advancement; and the profession would soon be drifting backward.

In looking over the medical history of the past it will be noticed that nearly all, if not all, the recent discoveries were made by those who had chosen some special line of work.

That some cases which were formerly only treated by the specialist are now treated by the general practitioner, only proves that the general practitioner is in line with the onward progress of our rapidly growing methods of diagnosis and treatment.

Our schools and colleges are to-day making compulsory the study of the special branches which, but a few years ago, were hardly made mention of; not, however, with the idea that each student should consider himself as specially fitted to treat all cases, but that he should be able to recognize and understand their importance, so that his patient may receive intelligent advice.

That there is and always will be a field for the specialist, and that there is much room for development along all special lines, no observer can well deny.

TRACHEOTOMY IN BREECH PRESENTATION.

"Tracheotomy in Breech Presentation" is the odd title of a clinical report by Dr. Herbert Marion Stowe, of Chicago, appearing in the *Journal of the American Medical Association* of October 19, 1901. The article brings forward an idea which is entirely original, and which deserves serious consideration. The history of the case in brief is as follows:

Mrs. E. M. C., aged thirty-one years, was taken in labor with her second child at 12:30 P. M., September 1, 1901. Dr. Stowe was summoned at 10 P. M. of the same day. Diagnosis of breech presentation was made, the breech being high up and not engaged; fetal pulse 160 per minute. The author decided to extract the child because of the danger of asphyxia. The first act of extraction was easily completed, but after the arms had been delivered the head became fixed in the inlet. By employing the Mauriceau method, combined with strong suprapubic pressure in the Walcher posture, the head was finally brought deeper into the pelvis. Successful extraction of a living child, however, now seemed impos-

sible. Convinced that the child's life was practically lost, the author decided to perform tracheotomy as an experimental operation. The body of the child was lifted up and the neck washed. The perineum was pressed back and then tracheotomy was performed. A soft rubber catheter was next introduced and air gently forced into the lungs by means of an air-bag. The respiratory rhythm was soon voluntarily inaugurated and maintained, the body becoming pink in color. In fourteen and one-half minutes after the delivery of the arms the after-coming head was carefully extracted with forceps. The child was found to be living, respiration having taken place entirely through the tracheotomy opening in the larynx. A stitch was taken on each side of the incision and the ends of the threads tied behind the neck, making effectual retraction of the tracheotomy wound and permitting free access of air when the catheter was withdrawn. Five hours later the wound was closed with fine catgut sutures and normal respiration established. Mother and child made a perfect recovery.

The suggestion of performing tracheotomy in cases where, after difficult version, the life of the child would surely be lost because the head cannot be delivered speedily enough to prevent asphyxia, is a most ingenious one, and will commend itself to all who have had this trying experience. There is no doubt that the life of many a child will be saved by an institution of this procedure in indicated cases. The procedures commonly made use of in bringing help to the child in this almost hopeless extremity can only be applied in those cases where we can reach the mouth—*i. e.*, where we can introduce two fingers into the mouth and allow air to enter through the hollow of the hand, or where we allow air to enter through a catheter inserted into the mouth. Blacker gives in *London Lancet*, October 19, 1901, a historical review of several procedures of preventing asphyxia. These methods, of course, cannot be used where the further extraction of the fetus is made impossible by a firm contraction of the cervix around the neck of the fetus. In such an event it is the rule that cervical contraction always becomes more pronounced when we endeavor to free the clasped head, thus rendering the asphyxia more severe. It is just in this class of cases that the application of Stowe's idea of tracheotomizing the child seems most ideal. It must be remembered, however, that a wise conservatism should guide us in following out Stowe's suggestion, for in instances where the head is merely retained by a rigid perineum an epistotomy will always be preferable to a tracheotomy.

PROSTATECTOMY.

When prostatectomy first began to be done, the mortality was so great (about twenty-five per cent.) that even those most fitted to undertake it, did so with a feeling that it was a last resort of very uncertain ending. The operations were done by the suprapubic route, as furnishing the most accessible and certain way of reaching and removing the obstruction of the prostate. Bleeding was usually great, whether the ronguer forceps to gnaw off the projections, or other means of enucleation, were used. This severe blood loss was a most important factor in lessening the ability of the patient to recuperate from the operation; and as the bladder, after having an opening in it, became flaccid and lost its power of contracting down upon a tampon placed in it to stop the bleeding by pressure, the hemorrhage could be checked only partially and with difficulty. Capillary oozing continued for several hours. Infiltration of urine about the bladder and

especially about the space of Retzius was a serious consideration. Hernia followed a number of recoveries.

Since perineal prostatectomy has been introduced, these unfavorable factors have largely disappeared, and prostatectomy has lost many of its unsavory features. The bladder, having all of its attachments unharmed and being in its entirety, loses none of its contractility. The neck can be compactly and securely plugged with gauze, thus stopping bleeding at once. As the prevesical space is not opened, the danger of infiltration is diminished. Drainage is more satisfactory; and instead of the patient struggling along uncomfortably with dressings more or less saturated with urine, and remaining in bed from three to six weeks, he keeps dry, and passes a comparatively easy decubitus, usually being up and about within ten days to two weeks. The whole picture is quite a different one. As the time consumed in making the perineal urethrotomy and enucleating the prostate is short (ten to fifteen minutes being the average time), the profound shock often encountered in the suprapubic operation is almost entirely eliminated.

In his discussion before the American Association of Genito-Urinary Surgeons, May 2, 1901 (*J. Cut. and G.-U. Dis.*), Bryson reports thirty-nine cases of perineal prostatectomies with three deaths, or 7.5 per cent. mortality, two of these being due to accidental infections (erysipelas and influenza). He states his first operations were by the suprapubic route, with a high mortality. Later he employed the combined suprapubic and perineal method, with a lessened death rate. He now operates by the perineal route, with a mortality that is scarcely higher than that of perineal urethrotomy or cystotomy.

A NEW MEDICAL NIGHT SCHOOL.

It has lately been announced that a new school of medicine is about to be opened as a department of the Temple College of Philadelphia. The preliminary announcement states that the course will be five years, and will lead to the degree of M. D. The sessions are to be held from 6:45 to 9:45 P. M. We cannot but express ourselves as convinced of the lack of wisdom in establishing such a school. The foundation of a medical school which will take its place by the side of the best in the country would require very large endowments, and would include the very best possible facilities for clinical teaching and laboratory work. All the "short-cuts" and easy methods of fitting men for the profession of medicine are to be frowned upon. The argument that such an institution as the one outlined will be of advantage to a number of poor young men who seek to acquire a medical education is hardly tenable. All of our great medical colleges provide scholarships for those who are worthy, and numbers of poor young men have acquired medical education at these institutions. We believe that professional education stands in a place by itself in its advantages, in its claims and in its obligations. The inspiration which leads men to seek knowledge is worthy, but it must be well directed. By this night school method of obtaining a doctor's degree, young men occupying positions during the day will be enrolled and graduated after five years with the coveted degree, and this degree will seek to place them on terms of equality with those who have devoted four full years to the same end. There are a host of objections which occur to us concerning the matter. To our minds the establishment of this school, and another of its kind now operating in Chicago, is a hard blow at higher medical education and all which that includes.

We do not speak in any carping spirit, nor with any personal feeling in the matter, but we think that the standing of the medical profession to-day demands absolutely all of the student's time during his course; that it should be the whole object of those years of his life and not a side issue. All institutions which offer courses based upon night work, or instruction furnished by mail, cheapen the medical degree. Numbers of young men who are earning excellent wages in various walks of life are induced to take these courses and give up a sure livelihood for the precarious existence within the profession; especially precarious for them on account of the fact that they are necessarily not the best prepared, nor fitted to compete with the graduates of the great medical schools. We believe that it should be the business of the State to inquire into the standing of institutions of this kind. Shall every institution which so chooses confer the degree of Doctor of Medicine? Will it be possible for those students to receive the proper laboratory and clinical training which the profession demands? We recognize the high standard of Philadelphia medical schools, and we feel that the establishment of this new school along the lines projected cannot be an advantage to the city as a medical center, to the graduates of such an institution, or to the medical profession.

TETANUS-INFECTED ANTITOXIN OF DIPHTHERIA.

A most unfortunate accident has occurred in this city in the preparation of the diphtheria antitoxin made and issued by the Health Department. Cases injected with diphtheria antitoxin developed fatal tetanus, eleven children having succumbed up to the time of the present writing. Other children, who were likewise infected, survived. The simultaneous outbreak, with the history of the cases, leaves no doubt but that these lives were lost as a consequence of infection of the serum with tetanus bacilli or tetanus toxin. Simultaneously with the death of the first few cases the coroner ordered an investigation. In first order, a commission of three local bacteriologists was appointed to investigate the technical side of the question and to ascertain who, if any one, was responsible for the contamination of the serum. This commission have been at work on the matter during the past week, and will probably make their report in the very near future. Coincidentally with their research the coroner has held an extended inquest, summoning all the physicians who have used the serum. Judgment must be withheld until all the testimony is in and the expert bacteriological evidence submitted.

The affair is a most unfortunate one, not only because so many lives were lost, but mainly because the use of antitoxin for some time will be attended with difficulties. The laity are ever prone to cavil at what we know are scientific remedies, but which they do not understand. This is especially true of antitoxins in general. In short, the accident will furnish a formidable weapon to the opponents of antitoxin, of which they will not hesitate to avail themselves. Vaccination has its enemies, and so has antitoxin. This contamination will mean a determined fight on the part of the opponents of the remedy against its use. The medical profession must use every effort to make the public understand that this is not something which can be expected at any time with the use of antitoxin, but that it means an accident which can be prevented at all times when due care and diligence are exercised in the preparation of the product.

Until the report of the bacteriologic commission is in, we will withhold judgment as to who is to be blamed for this untoward occurrence.

MUNICIPAL WATER SUPPLIES.

The matter of purifying municipal water supplies is practically a new one and belongs to the past decade. European cities preceded American cities in taking steps towards securing pure water for use of their citizens, the hygienists abroad having long ago demonstrated the necessity of having pure water by virtue of the severe lessons taught them by the visitations of water-borne diseases. Each epidemic that has been definitely traced to a pollution of a water supply has done a good service, in that it has served to acquaint us with the prime importance of either obtaining naturally pure water or else purifying a known polluted source.

Pursuant with the importance of the subject, American cities, one after the other, have been agitating the question of obtaining pure water. In most instances the matter of purifying water supplies has resolved itself into a filtration proposition. Municipalities have seemingly been content to entertain thoughts of filtering their polluted water supply, with never a thought of obtaining an unpolluted water supply without filtration. Filtration on a large scale seems to be rather a successful procedure in some cases, but is not, of course, to be compared with the idea of using unpolluted water. In this connection the remarks made by Mr. Tribus in the Proceedings of the American Society of Civil Engineers for August, 1901, are quite pertinent and might well be quoted: "Every few years the world takes up a new fad. The fad in sanitary science to-day is filtration. Percentages are dangerous forms of comparison. It may be misleading to speak of the removal of bacteria in percentages. For instance, 99 would seem to be a high figure, yet 99 per cent. removal from water carrying 5000 bacteria per cubic centimeter gives no better result than 95 per cent. from water carrying 1000 per cubic centimeter, in each case 50 per cubic centimeter remaining in the effluent. . . . While endorsing without any qualification filtration of water supplies whenever polluted, it would seem that there can be no question that if a source of supply free from contaminating influences can be secured, such source is to be preferred in comparison even with the best methods of artificial purification possible, conditions of constructive and operating costs, permanence and accessibility for inspection being equal." . . . Further references on this subject show that the consensus of opinion among civil engineers is as follows: "That where the cost is not unnecessarily large, and under other favorable conditions, a pure supply from an uncontaminated source is decidedly preferable to a purified water from a sewage-polluted stream." (Proceedings of the Am. Society of Civil Engineers, Sept., 1901.)

It can thus be seen that the best engineering talent in the country deems it preferable to use unpolluted water in preference to filtering a known polluted source. It really resolves itself into a common-sense proposition. Municipalities will do well to bear this in mind when entertaining thoughts of purifying their water supplies. Better use a pure supply than a filtered impure supply. This detracts nothing from our preconceived ideas on filtration. We recognize the efficacy of filtration and endorse it where an unpolluted supply cannot be obtained. In all other cases let us have pure unfiltered natural water.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

A Contribution on Aneurism of the Aorta.—ANTON KROKIEWICZ, Krakaw (*Wiener Klinische Wochenschrift*, No. 31, 1901).—In 551 cases of aneurism, 86.37 per cent. were of the thoracic aorta. Of these, 58.8 per cent. involved the ascending aorta, 28.7 per cent. the arch, and 12.5 per cent. the descending aorta. They usually occur where the blood pressure is especially great. The points in differential diagnosis as to the portion of the aorta involved are clearly set forth in this article. The author describes a case in which a large tumor appeared over the left nipple, pulsating asynchronously with the heart. Gelatine injections and other forms of treatment did not deter the increase in its size. A diagnosis was made of sacculated aneurism of the ascending aorta and the bulbous portion within the pericardial sac, chronic endocarditis, cor bovinum, and erosion of the fourth, fifth and sixth left ribs. The post-mortem corroborated the diagnosis. There was also a dilatation of the ostium pulmonale, a very rare occurrence. Some difficulty was experienced in excluding the possibility of an aneurism of the right auricle, but because of the asynchronous pulsations of the heart and the tumor this was finally excluded.

Aneurism of the Ascending Aorta with Perforation Into the Superior Vena Cava.—DR. V. COMINNOTI, Triest (*Wiener Klinische Wochenschrift*, No. 36, 1901)., reports a case of aneurism of the aorta presenting very unusual clinical features. Aside from the usual symptoms of thoracic aneurism, there were marked œdema and cyanosis of the head, neck, upper extremities and thorax. Here and there the veins formed small varicosities; the large superficial veins of the head, neck and thorax being greatly dilated and tortuous. The right jugular showed a positive venous pulse. An area of dullness extended from the middle of the clavicle to the fourth rib. This area of dullness would vary in extent from time to time, even within the course of a few hours. The œdema and the area of dullness seemed to go hand in hand, the one increasing as the other increased. The diagnosis offered was aneurism of the ascending aorta, with compression of the superior vena cava and perforation into same. The post-mortem revealed the correctness of the diagnosis. The perforation into the vena cava was suspected because of the periodical changes in the extent of the area of dullness, a harsh systolic venous-like murmur, tension of the venous system and the impossibility of relief through the collateral circulation, the development of varicosities on the thorax, positive venous pulse and the very rapid development of the trouble. Such cases have been very rare. The author was able to find but seven, though thirty cases are said to have been collected by Peffer and Griffith. An instructive statistical table is presented, together with a careful review of the symptoms of thoracic aortic aneurismata in general.

Observations in a Case of Aortic Aneurism.—DR. LANDGRAF (*Berliner Klinische Wochenschrift*, No. 27, 1901), in the discussion of so-called cured cases of aneurism of the aorta, reports his observations of a case in which there was a total cessation of the clinical symptoms. In August, 1898, the examination of the patient revealed hoarseness due to paralysis of the left vocal cord, an area of

dullness over the sternum, over which pulsations were palpable, hypertrophy of the heart, a marked difference in the radial pulse of the two sides, dyspnoea, etc. Under the usual treatment the symptoms gradually abated: the dyspnoea ceased, the circulatory symptoms disappeared, the cardiac dullness became smaller, as also that over the manubrium sterni, the left vocal cord assumed the normal position, the voice became loud and clear: in fact, clinically the patient appeared in his normal condition. The radiograph showed the presence of a thoracic tumor which could only be interpreted as an aneurism of the thoracic aorta. In 1899 he had assumed command of his regiment and was in no way affected by the hardships of military life.

Collateral Arterial Circulation in Aortitis Deformans, Obliterating the Large Branches of the Arch of the Aorta.—WILHELM TUERK, Vienna (*Wiener Klinische Wochenschrift*, No. 32, 1901).—A patient, forty-four years old, with specific history, presented symptoms, referable to the chest, characteristic of aneurism of the aorta. The large arteries supplying the upper part of the body were practically pulseless; the right subclavian and carotid pulsating slightly, while in the left subclavian and carotid, and the radial and brachial of both sides, absolutely no pulsation could be felt. On the other hand, the abdominal aorta and the arteries of the lower extremities pulsated unusually hard. Inspection and palpation of the skin of the hips and back revealed a large number of pulsating tortuous vessels as large as goose quills, extending from below upward to the angle of the scapula, and then into the axilla. The flow of the current was from below upwards. The post-mortem verified the diagnosis, viz., obliteration of the branches of the arch of the aorta at the point of division, due to aortitis deformans and an aneurism of the aorta.

The collateral circulation took place through the iliac artery, the inferior and superficial epigastric, subclavian, etc., and was so complete that no functional disturbances arose in the upper part of the body. Death resulted from perforation of the aneurism into the œsophagus.

Aneurism of the Recurrens Type.—PREBLE, Chicago (*Medicine*, September, 1901).—"Aneurism of the recurrens type" is an expression adopted by Dieulafoy for those cases of aneurism involving, in some way, the left recurrent nerve. The anatomical relations of the aorta, the bronchi and the recurrent nerve are of great importance in this connection.

He reports two cases of this type of aneurism in which the pressure of the aneurism produced stenosis of the left bronchus. The respiratory movements of that side were lessened, the vocal fremitus, the respiratory murmur and voice sounds were reduced. The percussion note, however, was normal, and there were no murmurs over the left bronchus.

The subjective symptoms of the existing stenosis of the bronchus were paroxysms of coughing, dyspnoea and dysphagia.

A Dilated Superficial Vein with a Suggestive History.—THEODORE FISHER, London (*The Lancet*, September 28, 1901).—At the age of one and a half years a child was seized with convulsions and remained unconscious for a week. There was no loss of power in either the arms or legs. The right leg and thigh became swollen, and there appeared on the abdomen a large dilated vein running upward from the center of the right groin to the costal margin. Here it divides into several branches, some of which reach nearly as high as the clavicle. This must have followed obstruction of the external or common iliac vein. The evidence of thrombosis of a vein within the abdomen following so shortly the cerebral symptoms suggests also thrombosis of some cerebral vessel. No hemiplegia was present, but this is not absolutely necessary. Thrombosis of a vein in the region of the motor area need not occasion hemiplegia.

Concerning the Use of Subcutaneous Injections of Gelatine in Hemorrhage.—

DR. GRUNOW, Kiel (*Berliner Klinische Wochenschrift*, No. 32, 1901), has, since 1899, been investigating the efficacy of gelatine injections in various forms of internal hemorrhage. His material consisted of seven cases of pulmonary hemorrhage in phthisis and gangrene, eight of intestinal hemorrhage, seven of gastric hemorrhage, two renal hemorrhages, two from the bladder, and one aortic aneurism. 400 c.c. of the gelatine solution (2 g. gelatine to 100 c.c. physiological salt solution) was injected under the skin of the breast, abdomen or thigh. The thigh is preferable in most cases. In a majority of the cases there were very satisfactory results. In those cases in which the results were unsatisfactory, the gelatine was either employed too late or was not used in sufficient quantities. The best results were noted in those cases in which there was already a tendency to coagulation of the blood, as in the neighborhood of small bronchi, the pelvis of the kidney, etc. Its employment, however, is more or less indicated in all cases of internal hemorrhage.

The factors upon which the results depend largely—*i. e.*, those which affect the coagulation of the blood—are, with reference to pulmonary hemorrhage especially, the following: (1) coagulability of the blood itself; (2) the amount and rapidity with which the blood springs forth—this will depend upon the nature of the vessel, the size and form of the erosion and the blood pressure; (3) the size of the bronchus; (4) the tolerance of the bronchial mucous membrane for foreign bodies; (5) plethora of the bleeder; and (6) the contents of the bronchus.

Some of the accompanying results of the injections are: pain at the point of injection, fever, occasional eruptions resembling urticaria, and rarely a swelling in the muscle. The elevation of temperature occurs in almost all cases, but is not great, and is quickly relieved by discontinuing the injections.

The author concludes that: (1) he was convinced of the efficacy of gelatine injections in a number of his cases; (2) that while these injections are sometimes accompanied by unpleasant symptoms, these are not contra-indications to its use; (3) in view of the transitory coagulative action of the gelatine, he recommends in all cases of severe internal hemorrhage the employment of the gelatine injections for a period even after the hemorrhage has ceased; (4) sometimes this action of the gelatine is not alone sufficient to stop the bleeding: in these cases direct or indirect hæmostatics must be employed in conjunction with the gelatine.

The Employment of the Recuperative Power of the Heart as an Estimate of its Functional Ability.—DR. MARTIN MENDELSON, Berlin (*Philadelphia Medical Journal*, September 14, 1901).—Diagnosis begins to direct itself more and more toward ascertaining the altered functional power of an organ rather than its altered structure. The highest mission of clinical medicine is to preserve or increase the functional power of organs, since it cannot greatly influence tissue change. In the case of the heart we have little knowledge as to how far tissue changes influence the power of the heart. In order to enable a diseased heart to compensate properly, the physician must first be able to recognize and estimate its functional power. Various methods have been employed for this purpose, but have proven impractical. The author in describing the method that he has employed, emphasizes the fact that every organism is the better able to exert its functional power the more it is enabled to replace the material which has been consumed during its function. The two great conceptions of modern therapy, exercise and rest, have a far-reaching significance for this subject. The replenishment of consumed substances in the heart is performed during its periods of rest, the diastole. With the length of the diastole the opportunities for nourishing the heart increase. In order to employ for diagnostic purposes the sign of complete cardiac recuperation, which is the basis of the author's experiments, it is necessary to determine the absolute heart frequency uninfluenced by secondary

stimuli. This is best done in sleep, at any rate in the reclining position. The normal heart beat varies with the change of position. From the ratio between the heart beat in the vertical and horizontal position certain conclusions may be drawn as to the compensatory power of the heart. With the Gaertner's ergostats the relation of the heart beats to the amount of work done by an individual may be easily determined, and the length of time required for the heart to return to its normal condition fixed upon. Through thus testing the functional activity of the heart, the author claims to have simple and reliable means for observing and following up the compensatory and recuperative power of the heart.

Paroxysmal Tachycardia.—ROSE, Strassburg (*Berliner Klinische Wochenschrift*, July 8 and 15, 1901).—The patient had been subject to attacks of pain in the stomach, vomiting, and palpitation of the heart. During his sojourn in the clinic he had three attacks of tachycardia, one lasting six or seven days, the other two about a half day. The frequency of the pulse varied from 212 to 260. There was no evidence of organic involvement of the heart, though the pulse was at times somewhat irregular. Neither percussion nor the Roentgen rays revealed any hypertrophy of the heart. Throughout these paroxysmal attacks the respiration remained regular and normal.

There was a pronounced polyuria immediately after the attacks. They were also accompanied by gastric symptoms, herpes labialis and areas of paresthesia.

The author considers the paroxysmal tachycardia in this case the expression of a neuropathic tendency. Drugs produced no effect in the amelioration of the attacks. Complete rest accomplished the best results.

Leucocyte Counts in Hemorrhage.—HEAD, Minneapolis (*Journal American Med. Assn.*, August 24, 1901).—Experiments upon dogs with reference to the effects of hemorrhage on the leucocytes and the duration of the leucocytosis led to the following conclusions: 1. A diminution in the number of white blood cells in the circulating blood immediately follows profound hemorrhage. 2. This initial leucopenia is followed sooner or later by an increase in the number of leucocytes in the circulating blood, so-called post-hemorrhagic leucocytosis. 3. The leucocytosis of hemorrhage continues for at least seven days, and in some cases much longer.

The Condition of the Blood in Scarlet Fever.—PERCIVAL MACKIE, Bristol (*The Lancet*, August 24, 1901).—Blood examinations in twenty-five cases of scarlet fever enabled the author to reach the following conclusions: The red cells numbered between 3,500,000 and 4,000,000. The percentage of hemaglobin was in direct ratio to the number of red blood corpuscles. Leucocytosis was found in all cases, varying not with the temperature, but the severity of the throat lesions. In anginal cases the leucocytosis was very high. Leucocytosis began about twenty-four hours after the appearance of the rash. In some cases the leucocytosis decreased as the disease became more severe. This seems to be, as in pneumonia, an ominous sign. The leucocyte count in these cases is of greatest importance, giving not only some idea of the progress of the disease, but also an indication of septic complications. The author's observations agree with those of other authorities on the blood.

Report of a Case of Purpura Hemorrhagica.—A. HYMANSON, New York City (*American Medicine*, August 31, 1901), reports of case of purpura hemorrhagica in which the initial symptoms were referable to the abdomen. The first symptoms were severe abdominal pains, repeated vomiting, a dozen or more bloody stools, a slight elevation of temperature, and a frequent pulse. These symp-

toms abated, and three days later an eruption appeared on the arms and legs, typical of purpura. Following this there were frequent attacks of severe abdominal pains, with collapse. These were supposedly due to pressure on nerve plexuses resulting from an internal hemorrhage. Dr. Jacobi thought the paroxysms due to pancreatic hemorrhages. The writer pleads for the administration of vegetable acids in the treatment of all varieties of purpura.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Black Vomit in Appendicitis. A Case in which Trauma was of Etiological Importance.—BOECKEL (*Gazette Medicale de Strassbourg*, June, 1901).—Twenty-four hours after a severe blow on the abdomen of a child suppurative appendicitis commenced. Five days later the child vomited a large amount of dark blood, in which was found a long worm. An operation was performed with satisfactory result. The author concludes that the worm had been driven from its resting-place in the appendix by the force of the blow, and had thus caused an erosion, from which the infection was set up.

The Mortality of Appendicitis.—DEAVER and ROSS (*Journal of the American Medical Association*, October 5, 1901).—These gentlemen give statistics which are replete with valuable information, founded as they are on the two hundred and sixty-eight appendicitis operations done at the German Hospital in Philadelphia during the year 1900. The mortality was 17.8 per cent. in all classes of cases, this including all who died of complications, etc. The causes of death in cases which are not operated upon are: peritonitis, obstruction, and the appearance of secondary foci in other parts of the body. Of the patients at hand, one hundred and twenty-four were operated for chronic disease in the interval, and of these only one died. There is a class of cases so "fulminant" that they will all die though operated upon within the first few hours after the attack, and in such cases a general peritonitis is found. It is advisable to remove the appendix where possible, because the individual is thus spared the dangers and discomforts of fecal fistula, secondary pockets, and subsequent attacks. A skilled surgeon can usually accomplish this delicate matter without endangering the patient. The intensity of the onset is a matter of the utmost importance if the surgeon would give a reliable prognosis in the fulminating cases. In chronic cases the attacks tend to become more and more severe as they recur. The case is one of particular gravity when the appendix points up behind the cæcum, for a collection of pus in this location may lead to interference with the blood supply of this large gut and necrosis. A collection in the female pelvis may, on the other hand, lead to lasting disease of the genital viscera. The typhoid germ is much more frequently the cause of the disease we are considering than is supposed; and typhoid fever, as such, does not preclude a successful operation.

Suppurative Pericarditis Following Appendicitis.—MANN (*Annals of Surgery*, October, 1901).—The author's case was not confirmed by operation, but it appeared clinically to be one of appendicitis. A girl twelve years old was taken with a severe abdominal attack on the 28th of February. After a few days her knee, ankle and wrist became the seat of what was taken for a severe non-articular rheumatism. On March 7th a mitral murmur appeared, and on the 10th collapse symptoms ensued, with difficult breathing and a great increase in the

precordial area of dullness. An aspiration of the pericardium was made, and on the appearance of pus the sack was widely opened and stitched to the skin. The little patient made a satisfactory recovery, which the surgeon considers due in great measure to the fact that no other germ beside the pneumococcus was found in the pus from the pericardium.

An Appendicitis Operation in the Interval—Entero-Anastomosis.—MARTIN (*Centralblatt fuer Chirurgie*, September 28, 1901).—This German author had a chronic case in which obstructive symptoms decidedly outweighed those of a focal nature; hence at the operation he found it practicable to direct his efforts above the seat of the inflammatory involvement, and to make a lateral anastomosis between the ileum and the cæcum. All the symptoms subsided in a short time, and the patient has as yet had no further trouble, although, as the author admits, the time is still too short for a definite prognosis as to the probability of future attacks of appendicitis.

Acute Tuberculous Peritonitis Simulating Appendicitis.—ROUSSEAU (*Gazette des Hopitaux*, September 24, 1901).—In the three cases mentioned the disease attacked individuals who were apparently in the enjoyment of perfect health. Still there had been suspicious symptoms, when the matter was sifted; one had had gastric manifestations, another pulmonary, and the third, intestinal disturbance. Still the serious trouble came in the form of a most acute and severe onset; there were the usual abdominal manifestations, especially pronounced around McBurney's point. There was low temperature but rapid pulse, and a tongue similar to that of typhoid. There are two kinds of these cases: those which simulate appendicitis with circumscribed peritonitis, and those which resemble the diffuse trouble which follows perforation. The diagnosis can only be made when a close study of the patient's previous history has been made. Prognosis in the two forms is about the same as in the two forms of appendicitis to which they are compared; most of those belonging to the lighter form recover, especially when surgical treatment has been instituted at the proper time.

Appendicitis and its Treatment.—A. J. OCHSNER (*Medical Standard*, August and September, 1901).—The author's paper is divided into two parts, the first treating of the palliative treatment, the second of the radical surgical treatment. The latter is along well-established lines, while the former contains much that is important but probably greatly neglected, by surgeons at least. It is well to know how to do an appendicitis operation, but it is certainly just as important that the surgeon should know when *not to operate*; this is what Ochsner gives us. He mentions the very high mortality in perforative and gangrenous cases operated upon after the first thirty-six hours; the per cent. increasing till the end of the third day, after which time all are lost. However, very many of these cases might be saved for a harmless interim operation, if only they were treated by the author's method of gastric lavage and rectal alimentation, no food by mouth and no cathartics.

Appendicitis and its Relation to Trauma.—SONNENBURG (*Deutsche Medicinische Wochenschrift*, September 19, 1901).—The author mentions the fact that Neuman, of Halle, says that trauma can never result in appendicitis provided the little organ be healthy; there must first be a stone present, and then a blow in the abdomen may cause some of the coats of the appendix to be ruptured, with a resulting infection. Neuman's remark is, however, misleading; for where a coprolith be present, we must presuppose a chronic inflammation; hence the sudden inflammation which follows a trauma in such a case can in reality be nothing more nor less than an acute exacerbation of a chronic morbid process, with which the injury had really nothing to do. The combination of trauma and

appendicitis must be a very rare one, and indeed Sonnenburg could trace such a connection in but twenty-two of the immense number of cases which have come under his observation. A few cases of medical jurisprudence have hinged on the point as to whether a blow can cause appendicitis, and in such cases the point has been very properly decided in the negative.

Appendicitis. Some General Remarks on the Pathology and Treatment. LLOYD (*Lancet*, September 21, 1901).—This article contains some very crude statements; in fact, it contains little that can be seriously taken, if one places any value on the opinions of our leading writers to-day. "The great majority of cases call for no operative treatment," is the striking remark which the author hurls at us. We can hardly expect much else from a man who in his next sentence writes of "an antiseptic operation," in this day of asepsis. He would treat a pus cavity with a rubber tube (never mentioning a gauze pack) and sew up a great part of his incision. Our author says further that "too early and too late an operation are to be condemned;" while he advises that all tubes and syringes used by the surgeon be rendered aseptic by the use of carbolic acid 1-20. The simple procedure of boiling these things seems never to have occurred to him. It is to be regretted that the writer of these antiquated notions did not give us some idea of his operative results. It is only natural to surmise that they would not look well on paper.

Surgical Treatment of Acute Appendicitis.—REHN (*Thirtieth Congress of the German Society of Surgery*, Berlin, April 13, 1901).—It must be noted that the infection of the appendix may come from the gut or through the blood, although the latter must be very rare. There can be no doubt that the affection is now much more common than formerly, and at the same time it seems, to Rehn, to be growing more virulent. Why should we hesitate to operate on a single pus cavity, in the fear of scattering infection, in view of the fact that we do not hesitate to grapple with general peritonitis? frequently with success. The ease with which we infect the general cavity seems to have been overestimated. This is then no cause for not doing an "early operation." No medical treatment can control the disease, as none can get at nor affect the process in the appendix. Prognosis in such cases is by no means certain; consequently we must embrace the surgical treatment if we would know and appreciate the true condition. Pain is somewhat of a guide to the severity of the attack; the pulse indicates the extent of peritoneal involvement; but temperature changes are no guide at all. In closing, Rehn is most emphatic in his admonition to operate in all cases as soon as the diagnosis can be made.

Some Unusual Features of Appendicitis and Their Treatment.—ERNEST LAPLACE (*Journal of the American Medical Association*, October 12, 1901).—Our author recites some unusual manifestations in appendicitis and the means which were used to combat them. In the first case the pain was all referred to the left side, but the surgeon was not deceived as to the nature of the malady, because the muscular rigidity was where one might expect, on the right. In the second case the symptoms were those of a retro-peritoneal solid tumor, but the incision revealed the whole matter to be an old pus collection which had originated from the appendix. Empyema of the gall-bladder was diagnosed and found in a third case, and by accident a gangrenous appendix was discovered, although no symptoms had attracted the attention of the observers to the spot before operation.

In case number four, the location of the tumor deceived the surgeon: here the affected area was confined to a radius of three inches around the umbilicus, but proved to be an appendicial abscess. It is supposed that contraction of the thickened omentum drew the attached tumor to its unusual situation. The author believes in continued flushing of the cavity, if general peritonitis be found.

THERAPEUTICS.

IN CHARGE OF

WALTER BAUMGARTEN, M. D.

The Medicinal Treatment of Perityphlitis.—BOMGET (*Therap. Monatshefte*, July, 1901, p. 340) protests against the exclusive employment of surgical measures in the treatment of appendicitis, and especially against the preliminary measures with which many surgeons meet the early symptoms of the disease, namely, the administration of opium and the application of ice to the abdomen. He urges rational medicinal treatment until subsidence of acute symptoms occurs, and advocates surgical interference only during the interval between attacks or in the event of suppuration.

Attacks of perityphlitis are always preceded by digestive disturbances of various sorts and various periods of duration, but the chief predisposing cause is constipation. For this reason the administration of opium is logically wrong. Although opium temporarily obviates the pain, it increases the constipation—the predisposing cause—and gives opportunity for further decomposition of the bowel contents. The aid in formation of adhesions, which is given by rest to the intestines by opium, is a negligible factor, for it is probable that ordinary rest in bed gives quite enough opportunity for such adhesions. The application of ice is also founded upon a misconception, for Lander Bunton has shown that an ice-bag upon the surface of the abdomen of a rabbit markedly increases the intra-abdominal temperature instead of decreasing it, as such application does in superficial areas.

The method of treatment urged by Bomget is the following: The patient is placed upon liquid diet, and, if he has anorexia, upon simply weak tea containing a very small quantity of milk. Half an ounce of castor oil with some antiseptic (the author suggests salacetyl, grs. xv.–xx.) is administered as soon as the patient is seen, and an attempt is made to empty the colon by a high enema, introducing a soft rectal tube for a distance of four to six inches, and injecting *very slowly*, at a temperature of 100° F., a quart of water to which has been added ichthyol 4 parts to 1000. With this water a definite quantity of finely divided olive oil is injected in order to soften the hardened fæces. The patient is placed on the right side, and the foot of the bed raised ten or twelve inches; as the fluid is injected, gentle massage is made from below upward along the course of the descending colon in order to aid the penetration of the fluid toward the cæcum. The fluid must be retained twenty to thirty minutes if possible, and the enema should be repeated twice a day as long as may be deemed necessary.

In the intervals between the enemata hot flaxseed poultices are applied to the right iliac fossa, and if the tumor be very prominent and painful, leeches may be tried.

After the second or third day the castor oil, which should have been given daily, may be replaced by a saline mixture of the following formula: Sodium bicarbonate, sodium phosphate, sodium sulphate, aa gm. 5.0, water 1000.0.; of this 150 c.c. are to be taken three or four times a day.

The remote danger of disturbing adhesions or of causing perforation of the gut by enemata is greatly overbalanced by the good derived from unloading the colon, and the improvement in the general condition and well-being of the patient. Pain and tenderness are reduced quite as much as by opium, and this reduction indicates an actual mitigation of the trouble, and not an apparent and only temporary relief. Moreover, toxic symptoms arising from decomposition in the colon disappear, and leave only those which are referable to the disease itself, the inflammatory and possible suppurative or gangrenous changes.

The Means of Arresting Acute Endocarditis.—CATON (*British Medical Journal*, October 12, 1901) describes a triple method of treating the endocarditis arising in the course of acute rheumatic fever, the general management of which has been the ordinary one of salicylates, light diet, strict confinement to bed, and flannel clothing. Considering a "change in the character of the first sound at the apex, a softening with loss of clearness, going on to the development of a bruit, . . . followed by accentuation of the first pulmonary sound" to indicate the commencement of valvulitis, he institutes the following treatment:

(1) Absolute rest in bed for six weeks, with the object of reducing the demands upon the heart to a minimum, lessening the force and velocity of the blood current and diminishing the pressure upon the softened valve cusps.

(2) Basing the next point in treatment upon the analogy of the effect of blisters on the joint condition in stimulating the vaso-motor and trophic nerves in the joint, small blisters of the size of a twenty-five cent piece are placed on the chest-wall between the clavicle and the nipple—that is, over the region supplied by the four upper dorsal nerves, which through the cord have an extensive communication with the sympathetic ganglia of the heart. A number of blisters are applied in succession, their efficiency being increased, if necessary, by covering them with small poultices.

(3) Sodium iodide is given internally for its reputed action in absorbing effusions.

The prognosis is better the earlier the treatment is instituted. The latter is useless if delayed beyond the second or third week. After apparent recovery the patient should avoid any muscular exertion for a period of two or three months.

The results of this method in ninety-two cases are as follows: Of sixty-one cases received with a distinct murmur, forty-one apparently recovered (lost murmur); of thirty-one cases in which the murmur developed while under observation, twenty-eight recovered.

The Therapeutics of Whooping-Cough.—MAYS (*N. Y. Med. Jour.*, September 7, 1901).—On the assumption that whooping-cough is a spasmodic affection of the vagus nerves, and in conformity to his belief that disease of these nerves plays a large part in many diseases of the lungs, Dr. Mays suggests the use of counter-irritants over the course of the vagi, and finds in it the only promise of relief in the disease.

At the onset massage along the course of the vagi is performed for an hour or two each day. A more energetic measure is the application of a strip of mustard-plaster two inches wide over the same region several times a day until the full effect is obtained. Instead of this a mixture of equal parts of gum camphor, chloral hydrate and menthol may be painted over the skin, or tincture of iodine may be applied twice a day until irritation is produced. Finally, in stubborn cases, Mays injects five minims of a two and one-half per cent. solution of silver nitrate into the skin over the course of the vagus, preceding this injection by another of five minims of a two and one-half per cent. cocaine solution.

Acute Amygdalitis: Its Treatment by the Local Application of Tincture of Iodine.—FLOERSHEIM (*N. Y. Med. Jour.*, October 5, 1901), with an experience of sixty-eight cases, advocates this treatment in cases of tonsillitis with marked swelling of both tonsils and the surrounding structures and intense pain. The official tincture of iodine is applied to the tonsils, fauces, soft palate and pharynx with a well-saturated camel's-hair brush. The burning sensation following the application should be borne, if possible, for a minute or two, when it may be relieved by a gargle of warm water. If no burning is experienced, a second application may be made in a few minutes. The pain rapidly disappears under this treatment and the swelling and redness are reduced.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

Negative Chemotaxis of the Leucocytes of Rabbits Infected with Pure Culture of the Chicken Cholera Bacillus.—ZILLEBERG and ZELIONEX (*Annales de l'Institut Pasteur*, August, 1901).—This excellent article containing the results of work on the phagocytes in their battles with pathogenic species of bacteria was written under the tutelage of Metchnikoff, and takes in the theory of Metchnikoff in regard to the phagocytic power of some of the leucocytes. It begins with a review of the literature on the subject. It may be stated that Metchnikoff in 1884 noticed that injection of anthrax vaccine into one ear of a rabbit produced phagocytosis at that place, while injection of virulent anthrax bacilli into the other ear was not followed by phagocytosis. Massart in 1892 introduced into the abdominal cavities of rabbits, guinea-pigs, etc., virulent cultures of anthrax bacilli, diphtheria and chicken cholera bacilli, and the organism of blue pus, also the vibrio Metchnikoff. In these experiments, *non-virulent* cultures attracted the leucocytes and gave rise to the phenomenon of phagocytosis, while *virulent* cultures did not do so. Bordet in 1896 (*Recherches sur la Phagocytose, Annales de l'Institut Pasteur*) studied the effects of injection of virulent cultures of the streptococcus into the abdominal cavities of rabbits and guinea-pigs. The leucocytes were not attracted, but a great number of streptococci were developed in the abdominal cavities in these cases. Those streptococci which developed in the animals and which did not come from artificial media attracted leucocytes, while the others which were introduced from without showed an areola around them (in the peritoneal exudate) which stained violet rose with Kuehne's blue. Marchand in 1898 also showed that leucocytes of the dog and guinea-pig destroy with great avidity non-virulent cultures of streptococci. Werigo (*Annales de l'Institut Pasteur*, 1894) concluded from numerous experiments that negative chemotaxis does not exist in warm-blooded animals. Tschistovitch (*Archives russes de Path. gen.*, 1900) failed to find negative chemotaxis by injection of virulent cultures of the streptococcus pyogenes into rabbits.

In view of the fact that the rabbit is very susceptible to the influence of the bacillus of chicken cholera, the present writers used this organism in their endeavor to ascertain the negative chemotaxis of the leucocytes of rabbits. Three rabbits were injected with this organism, killed within a few hours and their organs were fixed in sublimate solution, hardened in alcohol and stained by Nicolle's method. Marked phagocytosis was found. They also found that the bacillus quickly entered the liver and spleen after abdominal injection, and that in these sites there was always to be found a marked phagocytosis.

Further experiments were performed in order to prove that the absence of phagocytosis in the blood of rabbits in some cases is due to the poisoning of the leucocytes by the toxic products of the bacillus of chicken cholera. Artificial leucocytosis was produced in the abdominal cavity of rabbits, and then chicken cholera bacilli in virulent cultures were introduced. No phagocytosis was noted. Thereupon non-virulent cultures of the streptococcus pyogenes were introduced. Examination of the peritoneal exudate every fifteen minutes showed a marked phagocytosis with the streptococci, but none with the chicken cholera bacilli.

In order to prove that virulent cultures of chicken cholera bacilli contain many non-virulent forms, the following experiments were performed: a virulent culture from gelatin was injected into a rabbit which had been previously prepared by injection of a normal salt solution. No phagocytosis followed. The virulent culture was diluted five times and then injected, when phagocytosis was observed

in the peritoneal exudate. This made it apparent that there were some non-virulent forms in the apparently virulent culture, and that these non-virulent forms showed phagocytosis.

From the foregoing it can be seen that (1) after the injection under the skin or into the abdominal cavity of rabbits of a virulent gelatin culture of the chicken cholera bacillus, there is an absence of phagocytosis of the leucocytes towards these bacteria. (2) It is impossible to find phagocytosis after the injection of perfectly virulent cultures which have been previously developed in the peritoneal exudate of susceptible animals. (3) It is possible to explain the phagocytosis which follows upon the injection of practically virulent cultures of the chicken cholera bacillus into the skin, abdominal cavity or auricular veins of rabbits by the presence in these supposedly virulent cultures of some non-virulent elements. (4) The leucocytes of rabbits—an animal very susceptible to the chicken cholera bacillus—do not destroy virulent bacteria of this species during the course of the disease. This is an example of the absence of phagocytosis in the case of a mortal disease. (5) We can explain this absence of phagocytosis of the virulent chicken cholera bacilla, not by a poisoning of the leucocytes, but by their negative chemotaxic sensibility. The leucocytes of a rabbit infected with chicken cholera have the power up to the time of death, not only of distinguishing between the virulent chicken cholera bacilli and other non-virulent forms of other species, but also of picking out non-virulent elements from a virulent culture of the chicken cholera bacillus.

Does the Anthrax Bacillus Form Spores Under Strict Anærobic Conditions?
SLUPSKI (*Centralblatt fuer Bakteriologie, Parasit. u. Inf. Krankheiten*, Bd. xxx., Hft. 10, September 30, 1901).—The paper deals with an attempt on the part of Slupski, a pupil of Pfeiffer of Königsberg, to prove that the anthrax bacillus does not form spores when subjected to strict anærobic conditions of development. In this connection he calls attention in the first place to the postulates of Koch issued some time ago anent the formation of spores by an organism, viz., a suitable nutrient medium, a certain temperature and free admission of the acidulous properties of atmospheric air. Since Koch made these postulates it has become known that the admission of air is not necessary for the production of spores. Klett claimed that spore formation can take place in the presence of hydrogen gas. Klett made his experiments in Buchner tubes from which he claims the air was completely exhausted by means of the contained pyrogallie acid and potassium hydrate. Pfeiffer was of the opinion that Klett's finding was the result of faulty technique—i. e., that there was an incomplete exhaustion of air from the Buchner tubes. In order to be perfectly sure that all the air was removed from the apparatus in which his experiments were to be conducted, Slupski made use of an apparatus designed by Pfeiffer, it being quite an improvement over the Buchner tube for the cultivation of anærobic species. The apparatus might be compared to a large Petri dish containing another small dish in which distilled water was placed; over this dish another dish was placed, containing pyrogallie acid and potassium hydrate. Immediately over this was placed a triangle upon which rested the Petri dish proper, containing the cultures to be studied. The experiments were carried out in the most elaborate manner, cultures of tetanus and anthrax being used, with controls. The apparatus was doubly sealed with two layers of paraffin, thus effectually shutting out air. The whole apparatus, after being loaded with the cultures, was placed in the ice chest until the air contained was absorbed by the pyrogallie acid potassium hydrate mixture, and was then transferred to the incubator and watched for colony reproduction.

The results are divided up by Slupski into macroscopic and microscopic findings. (1) Macroscopic: the formation of a filmy growth on the anthrax plate was noted. A thin growth of the tetanus was noted. (2) Microscopic: Anthrax

bacilli grew in long threads, showing degeneration, many involution forms, but *no spores*. The tetanus plate showed mobile tetanus bacilli with beautiful end-spores. The research by Slupski thus demonstrates that *under severe anaerobic conditions, spore formation of anthrax bacilli will not take place*.

Cholecystitis Typhosa with Bacillus Typhosus.—BRION (*Centralblatt f. Bakteriologie, Parasit. u. Infect. Krankheiten*, Bd. xxx., Heft 10, September 30, 1901).—The typhoid bacillus was found in pure culture in the gall bladder of a patient at autopsy twenty-two hours after death. The case was a relapsing form of typhoid fever, complicated with a cholecystitis. The typhoid bacillus was identified by cultural characteristics and by the agglutinating reaction with serum from a rabbit inoculated with the same bacillus found in the gall bladder and with the bacillus typhosus (stock culture) of the laboratory. The bacillus did not produce gas. Cases of cholecystitis produced by the bacillus typhosus have been previously reported by Ehret, Stolz and Hunner, but in the previously reported cases the agglutinating test as applied in this case was not always performed.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Heart and Pregnancy.—FELLNER (*Monatschr. f. Geb. und Gyn.*, September, 1901) gives in this most elaborate paper the results of his personal experience in more than nine hundred deliveries, and of a study of the histories of five hundred and twenty confinements observed in Professor Schauta's clinic in Vienna, in one hundred and forty patients who suffered from a heart disease. Reflecting on all the different theories and teachings of many authorities, he arrives at the following interesting conclusions: The ventricles of the heart are, during pregnancy, mainly dilated and only slightly hypertrophied. The blood-pressure is, during pregnancy, usually somewhat increased. The blood-pressure reaches its highest point during a contraction of the uterus, and decreases during two labor pains. Immediately after the expulsion of the foetus the pressure falls far under the normal. In operative confinements (forceps, etc.) the pressure is increased during the tractions, the decrease after removal of the foetus more sudden and larger than in spontaneous deliveries. Nursing of the baby produces a slight temporary increase of the blood-pressure. The decrease after confinement is due to the disburdening of the abdominal vessels, to the lessening of the intrauterine pressure, and to a stasis in the vessels of the lungs. A puerperal bradycardia is rare. During the puerperium the heart is too large for the reduced amount of blood, and, therefore, contracts slower. During parturition and the puerperium almost six-sevenths of the heart-failures are overlooked (most probably because they do not cause any disturbance). In all cases of uncompensated heart-failure a necrotic zone is found along the margin of the placenta. In 20.2 per cent. of these cases the pregnancy does not reach the full term. The foetal mortality is 25.5 per cent. The duration of confinement, especially of the third stage, is often increased. If proper treatment is applied the majority of these patients stand the strain of delivery without any harm, even without being aware that they have a heart-failure. In the nine hundred cases personally observed by the author, only 0.9 per cent. of the mothers in whom heart-failures were diagnosticated died after confinement. (The figures usually given are too high, on account of the great number of cases in which the diagnosis of the heart-failure has not been made. Thus the mortality, calculated

from the histories of 30,613 deliveries, as observed in Schauta's clinic during the last nine years, is 6.3 per cent.) If heart disease is complicated by tuberculosis or chronic nephritis, the prognosis is impaired. The stenosis of the mitral valves seems to be more dangerous than other *vitia*. On an average, however, only the degree of the heart-failure, and not its nature, determines the outcome. Only rarely a marked deteriorating effect of pregnancy upon a heart-failure can be observed. In compensated *vitia* the induction of premature birth or abortion is only permitted if the condition of the patient at the time of a previous confinement was very serious. In uncompensated cases an immediate interruption of pregnancy is only allowed if an internal medication seems hopeless. Otherwise the latter should be tried first and the pregnancy interrupted when the general condition of the patient has improved. The best method of starting labor in cases of heart-failure is the introduction of a bougie. Rupture of the membranes is only indicated if the death of the mother is immediately to be expected, or if there is an œdema of the lungs. Cæsarean section is, in cases of uncompensated heart-failure, very dangerous, because the combination of anesthesia with loss of blood, due to the operation, and the quick emptying of the uterus makes the decrease in the blood-pressure more sudden and larger than under normal conditions. Marriage should be prohibited in cases of mitral stenosis, of uncompensated heart-failures, and when a vitium is complicated with tuberculosis or chronic nephritis. If a heart-failure becomes uncompensated during pregnancy, coition should be prohibited. If the condition of the patient was very critical at the time of a previous confinement, prevention of pregnancy by operative means is justified.

Sudden Rupture of the Bladder Due to Continued Pressure Exerted by a Fibroma of the Uterus. General Peritonitis. Death.—M. MAILLAND (*Gazette des Hôpitaux*, October 8, 1901).—A demented woman, forty years of age, is admitted to the hospital September 12, 1901. She is supposed to have met with an accident, the nature of which cannot be determined. A careful examination does not reveal any injury. Her condition, excepting the dementia, is about normal. No disturbance of urination. The following night the patient is very restless and the straight-jacket had to be used. Evening of September 17th the patient becomes violent and it needs the help of several attendants to bring her back into her bed. Next day the temperature rises to 104°. Patient vomits; abdomen considerably extended; constipation; pulse small; patient urinates spontaneously; no blood in the urine. Diagnosis of peritonitis is made and laparotomy performed. Abdomen contains about two pints of a reddish fluid, no pus, peritoneum highly injected. No cause of the peritonitis can be detected. Death forty-eight hours after operation. Post-mortem: the uterus contains several myomas varying in size, some of them calcified. The posterior wall of the bladder is ruptured. The linear tear is transverse, about four centimeters long. Around the hole to the extent of about a dollar piece the wall is thinned like worn away by a continuous rubbing or friction. No other pathological condition in the bladder, the mucous membrane normal.

The writer suggests the following explanation for this unique condition: The demented patient never emptied her bladder completely; the half-filled organ was thus continually kept in intimate contact with the myomatous uterus. The constant pressure impaired the vitality of this portion of the bladder and reduced its resistibility. A comparatively insignificant traumatism was then sufficient to produce the rupture. The wearing away by friction of adjacent organs, as bladder, vagina, rectum, even of the abdominal wall, by myomas of the uterus, has been observed in several instances. Flemming and Lisfranc reported a case in which a uterine myoma had perforated into the bladder and formed there the nucleus for a stone. In a case of Demarquay a perforating submucous myoma produced a vesico-uterine fistula.

Tubal Gestation. Sac Entirely Anterior to the Uterus.—ALBAN H. G. DORAN (*London Lancet*, September 14, 1901).—In tubal gestation the sac in the earlier months of pregnancy nearly always fills the *cul-de-sac* and more or less of the lateral fornix on the side where it developed. Experience has shown that a tubal sac may be displaced so as to lie on the opposite side of the pelvis. A displacement, however, as found in Doran's case, is rare and of great interest from the standpoint of diagnosis. An oval mass of the size of a turkey's egg was felt, lying just in front of the uterus, turning backwards towards the right fornix; the left fornix was perfectly free. At the operation this tumor proved to be the left pregnant tube, bent round to the right.

A Case of Inoculation of an Adenocarcinoma into a Laparotomy Wound.—R. SCHAEFFER (*Zeitschr. f. Geb. und Gyn.*, vol. xlv., August, 1901).—The question of inoculation of carcinoma is of the greatest practical importance. While a few authorities positively deny the possibility of such an occurrence, others seem to be too enthusiastic in pronouncing that the majority of local recurrences of carcinoma are not metastases, but transmitted by inoculation. The number of observations which substantiate this mode of transmission of malignant growths is very small. The history of Schaeffer's instructive case is, in brief, the following:

"Both ovaries have been removed per laparotomy from a lady forty-eight years of age. Microscopical examination shows adenocarcinoma. Four years later a very hard tumor is found in the lower part of the abdominal scar, larger than a man's fist. The tumor is extirpated and proves to be also an adenocarcinoma."

The evidence of this tumor in the abdominal wall having originated by inoculation is, in Schaeffer's opinion, established by the following circumstances: The histological structure of this tumor is identical to that of the extirpated ovaries; the tumor is strictly limited to the abdominal wall, shows no connection with the abdominal cavity, the peritoneum being intact; there is no other metastasis; the inoculation can easily be explained in this case by the removal of the fragile and brittle ovarian tumors four years ago.

PEDIATRICS.

IN CHARGE OF

JOHN ZAHORSKY, M. D.

Tuberculosis of the Female Internal Genital Organs.—DUENAS (*Arch. Ped.*, October, 1901).—Medical literature is not very rich in observations on genital tuberculosis of female children. Eighteen well-defined cases are only known up to the present date. The case reported was a colored girl, eleven years old. Family history unimportant. The patient had measles, which was followed by an irregular fever and diarrhoea. Abdominal pains were present. The abdomen gradually enlarged; considerable ascitic fluid was demonstrable. Repeated puncturing, blistering, and the internal administration of tonics and iodides failed to relieve the condition.

Laparotomy was performed. Tubercles were found scattered over the intestines. Both ovaries were tuberculous. Tubercles were scattered over the right fallopian tube.

An Analysis of Thirty-two Cases of Congenital Heart Disease.—MORSE (*Arch. Ped.*, October, 1901).—In forty-four per cent. the cardiac condition was discovered during a routine physical examination. Cyanosis was the most common symptom. It was absent in eight cases. In four the cyanosis disappeared after four days, fifteen days, one year, and one and one-half years. The phys-

ical signs varied. In two cases diagnosed as patent foramen ovale, nothing abnormal was detected. In four others a murmur was heard. In six cases diagnosed as deficient interventricular septum, the cardiac area was increased. Enlargement of the right side of the heart was found in pulmonary stenosis. The extremities were clubbed in but six. Clubbing of the extremities and enlargement of the liver and spleen were common in supposed lesions of the pulmonary orifice. In two cases the murmur disappeared. The recovery from lesions which, from physical examination, were apparently the same as those in cases which resulted fatally.

Heart Failure from Insignificant Superficial Ulcerative Processes.—ZUPPINGER (*Wien. Klin. Wochenschrift*, August 22, 1901).—Symptoms of cardiac failure and death resulted from very insignificant superficial ulcerative processes. The patients were infants, aged three, one and three years, respectively. The lesions were a phlegmon of the foot, ulceration in the groin, and cervical suppurative adenitis. Pronounced myocarditis and nephritis were found at the autopsy. The heart failure was indicated by pallor, weakness, breathlessness, and rapid, feeble pulse. No other symptoms of septic intoxication were present.

Treatment of La Grippe in Children.—CHAPMAN (*Brooklyn Med. Jour.*, October, 1901).—The temperature, if high, should be reduced by sponging. The coal-tar antipyretics should not be used. They are cell-destroyers. The low arterial tension contraindicates veratrum viride and aconite. Prostration should be met by stimulants, such as whisky, strychnia and digitalis. Quinine, camphor, caffeine and Russian musk are recommended.

For coryza with frontal headache, warm poultices of poppy-heads or chamomile flowers, placed over the nose and frontal sinuses, give relief. Steaming with tincture benzoin comp., oil of eucalyptus, menthol and thymol is useful in marked congestion of the air passages. Counter-irritation benefits bronchitis.

For nervous symptoms, nothing seems more efficient than external heat.

Use as little medication as possible, and trust mainly to careful nursing.

The Cure of Enuresis.—BARBOUR (*Ther. Gaz.*, September 15, 1901).—The great frequency of enuresis, and the absence of any determinable cause in most cases, have led us to infer that the most frequent cause has not been ascertained, and especially that it is not a neurosis only. The inefficiency of the usual treatment in ameliorating this common disease has led many to strive in an empyric way to secure some more brilliant and certain results than have obtained under any of the drugs which have been advocated for it.

The writer's experience with belladonna has not been favorable. Strychnine is indicated in those cases in which there is a general relaxed condition of the muscles. Iron is valuable in anemia.

The writer has obtained the best results from the internal administration of boric acid and salol. The results from this treatment have been uniformly good. The boric acid renders the urine acid. The salol is given to make it antiseptic.

The Value of Widal's Serum Reaction in the Diagnosis of Typhoid Fever in Children.—THURSFIELD (*Ped.*, October 15, 1901).—The writer believes that the test is even of greater value in children than in adults. Previous attacks of typhoid can usually be excluded. The reaction occurs earlier in children. In one hundred cases examined, the reaction was positive in forty-two. Most of these gave the reaction as soon as admitted to the hospital.

In children's disease, a positive Widal reaction is trustworthy evidence of the presence of typhoid fever. A negative reaction after the tenth day of an illness is strong, but not absolutely convincing, evidence of the absence of typhoid fever. Repeated negative reactions are trustworthy evidence that the case is not typhoid fever.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

A Tumor (Neuroglioma) of the Superior Worm of the Cerebellum, With Corpora Quadrigeminal Symptoms.—HERMON C. GORDINIER (*Jour. Nervous and Mental Diseases*, October, 1901).—A case presenting the following general and local symptoms: Man, aged twenty-one, wagonmaker. Double optic neuritis, passing on to atrophy, intense and continuous headache, vomiting, dizziness, slow cerebration, and gradual loss of memory. The focal symptoms were an ophthalmoplegia interna, with a double incomplete external ophthalmoplegia, a marked cerebellar gait, coarse tremor of the hand and ataxia in the left leg. According to Nothnagel, the following group of symptoms may be relied upon in localizing a tumor in the region of the corpora quadrigemina: First, an uncertain, unsteady gait, like that of a drunken man, especially if the gait is the first symptom; second, a double ophthalmoplegia, not entirely symmetrical and not involving all the muscles in an equal degree, with an especial predilection for the superior and inferior recti muscles; third, all other symptoms are subsidiary and of minor importance. Autopsy showed a growth projecting from the superior worm of the cerebellum. It was irregularly quadrilateral in shape. It measured $4 \times 3 \times 2\frac{1}{2}$ cm. In its forward growth, the tumor had involved by actual ingrowth the posterior corpus quadrigemina of each side. The anterior quadrigeminal body and the optic thalami did not appear to be affected. Histological study showed the tumor to be a neuroglioma. Although the case here reported presented the typical symptom-complex outlined by Nothnagel as being diagnostic of tumors having their primary seat in the corpora quadrigeminal region, the autopsy showed the growth to be located primarily in the cerebellum, and to have involved secondarily these bodies, together with the adjoining tegmental region.

Peripheral Nervous Symptoms in Pulmonary Tuberculosis.—M. G. CARRIERE (*Gazette des Hopitaux*, September 21, 1901).—Peripheral nervous symptoms in the course of a pulmonary tuberculosis are more common than is generally supposed. They are more frequently found in men than in women. As predisposing causes may be mentioned overexertion, exposure to cold, and alcoholism. They are practically never found excepting in cases of pulmonary tuberculosis, and generally in the third stage. No cases of peripheral neuritis have been reported in extra-pulmonary tuberculosis. The slow progressive type of phthisis predisposes to the development of peripheral nerve manifestations. In very many cases there is a history of alcoholism, and for this reason many cases found in literature are open to the criticism of a mistake in diagnosis, the active causative agent being alcohol and not tuberculosis. The most common symptom is a wasting of the muscles. Complete paralysis is rare. Tremor is a common symptom. The mechanical hyper-excitability of the muscles is a very suggestive symptom. Electrical changes, with the reaction of degeneration, are a constant finding, and were demonstrated by the author in all cases where, upon post-mortem examination, the existence of a neuritis was found. Sensory symptoms are more frequent than motor, and are found especially in women and in young subjects. Neuralgias were present in three-fourths of the cases reported in this article. Muscular hyperesthesia is frequent and anesthesia less so. Microscopic examination of the central nervous system of cases in which during life neuritis existed can be divided into two classes: First, those in which no appreciable lesion was discovered, about fifty per cent. of the cases; second, central lesions, cellular changes in the cord and changes in the peripheral nerves and muscles in

half of the cases. The symptoms may have the following three sources of origin: First, certain of them are of an hysterical nature, not corresponding to any anatomical lesion whatever; second, others are due to alterations of the central neurones; third, others still are due to a peripheral neuritis

The Application of Hypnotism in the Education of Vicious and Degenerate Children.—BERILLON (*Gazette des Hopitaux*, October 1, 1901).—According to Berillon, hypnotism should have a well-recognized place in the pedagogics of children of vicious habits, and who cannot be reached by ordinary educational methods. In the following conditions success is habitually attained: First, kleptomania; second, onanism; third, moral perverseness; fourth, onychophagia. Hypnotism should always be employed by or under the direction of a skilled physician, one who has made a special study of, and who has a special aptitude for, inducing hypnotic trance. The method is not applicable to idiots, imbeciles, or to subjects mentally feeble. Its efficiency is in proportion to the degree of mental development of the children. Instinctive and automatic impulses, which disappear readily in normal individuals under the influence of education, show great stubbornness in degenerates. In such cases suggestion in the waking stage has practically no influence, but suggestion made in the hypnotic state acquires a remarkable effect. The cures obtained by this means have shown themselves to be permanent, and no untoward effects have followed the application of hypnotism to children.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

Malarial Nephritis.—EWING (*A. J. Med. Science*, October, 1901).—While acute malarial nephritis is almost never immediately fatal, from the microscopic findings in the urine, and the clinical symptoms, it appears certain that in some cases a true exudative nephritis may occur dependent upon the malarial toxin. Previous findings have demonstrated the freedom of the kidney from localization of the parasites, and this has been attributed to its rapid circulation. The author's experience in fourteen cases bears out the freedom of the kidney from numerous parasites, but he reports a case with a fatal termination, which demonstrates that in malarial nephritis there may be a great massing of the parasites in the renal capillaries. In this case, the microscopic finding showed the lining cells of the tubules to be destroyed by extreme swelling and degeneration. The small cortical vessels were almost invariably collapsed, giving a whitish appearance to the organ in gross. In the medulla, most of the capillaries were filled, and many distended, with infected red cells and pigmented parasites. Many of the distended capillaries were ruptured. The numbers and compact massing of the parasites were similar to what occurred in like cases in which the parasites were massed in the brain, heart muscle, and bone marrow. Coarsely granular casts, sometimes entangling infected red cells and pigmented leucocytes were noted. The marked degeneration of the cortical tubules is attributed to the many parasites acting principally through obstruction of the circulation in the organ.

This form of malarial nephritis may probably be diagnosed by the presence of infected red cells in the urine, both free and adherent to casts, together with other microscopic evidences of acute nephritis.

Rapid arterial circulation and active phagocytic power seem to be the only

two factors which preserve a tissue from occasional overwhelming growth of the æstimo-autumnal parasite.

Thus three main types of acute renal lesions of malarial origin occur:

1. Acute degeneration of toxic origin, reaching a degree in which exudation of blood serum into the tubules is added.
2. An extreme form of acute degeneration of hæmoglobinuric origin.
3. Massing of parasites in the renal capillaries with extreme degeneration of the parenchyma cells, multiple hemorrhages, and exudation of blood serum into tubules.

Transplantation of Ureter.—SMITH (*Phil. Med. J.*, October 19, 1901).—A uretero-vaginal fistula was produced in a woman, thirty-two years of age, during a difficult forceps delivery. Later the vagina was much reduced in size by cicatricial tissue, presenting a cone-shaped appearance, with the apex at the point of the fistula, and constant contact of the urine with its walls produced an excoriated and ulcerated condition. Thirteen months after the delivery, two attempts to relieve the condition by plastic operation, at St. Bartholomew's Hospital, London, failed. Eighteen months later the patient applied to the author for treatment. After satisfying himself that the fistula was not merely vesico-vaginal, but uretero-vaginal, he attempted on two occasions to close it through the vagina. Having failed in each to get union, the seriousness of the case justified the more grave procedure of transplantation. After a previous administration of urotropine to sterilize the urine, he began operation by an incision through the abdominal wall down to the peritoneum, extending from the symphysis to the umbilicus, and endeavored to secure the ureter without opening the peritoneum.

But failing to complete the operation in this way, he made a small slit in the peritoneum, and easily picked up the ureter. He now ligated its distal end and severed it one inch from the bladder, because of the dense cicatricial tissue surrounding it. The ureter was split for one-third inch to prevent after stricture. An oblique slit was made in the right upper corner of the bladder, and the ureter stitched in, mucous membrane to mucous membrane, with fine chromicised catgut, and the fibrous coat of the ureter to the muscular wall of the bladder, with six fine black silk sutures, Van Hook's method being employed. Distention of the bladder with a pint of weak methyl blue solution showed no leakage. The slit in the peritoneum was closed with catgut, and the wound drained with a tube and a small piece of gauze. *Catheter a demeure* remained for five days. Eleven days after the operation, the patient held her urine for eight hours, and had gained in health and strength.

The ureter should never be implanted into the bowel, neither should it be tied to cause hydronephrosis. In view of the excellent results in transplantation, nephrectomy becomes a last resort hardly justifiable.

Movable Kidney.—WATSON (*Boston Med. and Surgical J.*, September 19, 1901).—Watson enters a protest against the current attitude of medical men as to operation upon movable kidney. They hold that it is unjustifiable because of the likelihood of recurrence of the mobility, and the failure of the operation to relieve symptoms, especially in neurasthenics; and, further, because most neurasthenics (about 80 per cent.) show some signs of movable kidney, and that little or no damage comes to the kidney.

While it is true that this condition does occur in many neurasthenics, in most instances it not being productive of serious injury, and that the symptoms referred to the kidney by the patient are not due to abnormal mobility, but are neurasthenic in character; yet sometimes neurasthenia is dependent upon the mobility, and serious consequences may result to the organ, such as hydronephrosis, pyonephrosis, fixation in an abnormal position, and, rarely, gangrene of the organ.

Numerous cases are quoted in support of this position. The author operated upon two cases in which the kidney, having previously been movable, was found to be firmly fixed by adhesions of inflammatory origin at and below the brim of the pelvis, causing paroxysms of severe pain. Morris reports a similar case. Out of the author's six cases of nephropexy, in one no relief was obtained; in one other conditions made judgment doubtful; the four other cases remained wholly cured. After a thorough discussion of the aetiological factors of the mobility and the various attachments and supports of the kidney, he concludes that the perirenal fascia with its attachment to the tunica propria of the kidney on the one side, and to the parietal peritoneum and fascia covering the lumbar muscles on the other, together with its strong connection with the diaphragm above, and in some cases the supporting interlacing fibers below the kidney, constitutes the most essential factor in the retention of the kidney within its natural position and sphere of motion.

The chief element in normal fixation can hardly be ascribed to the shape and size of the paravertebral fossæ, in which the kidneys lie beneath the diaphragm, because the normal motion of the kidney brings its lower pole beyond the limits of the lower boundary of the paravertebral fossa. He has observed the mechanism of the movable kidney in six subjects post-mortem. In one subject, in the upright position, the kidney would descend until the lower extremity caught on a band, which held it, while the upper pole fell forwards, thus kinking the ureter. In the recumbent position the kidney resumed its normal position.

Thorndike saw, *in vivo*, a kidney which, having been previously operated upon, adhered only at its lower pole, where the stitches had been inserted. Its upper portion would fall forward, while the lower was held fixed, so that it twisted the ureter and caused severe pain. This was clearly demonstrated at the second operation, which relieved the condition.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Report on the Histo-Pathology of Two Cases of Cutaneous Tuberculides in One of Which Tubercle Bacilli Were Found.—J. M. H. MACLEOD, M. D., M. R. C. P., and G. S. ORMSBY, M. D. (*British Jour. of Dermatology*, October, 1901).—The first case, a woman of twenty-five years, came for the treatment of acneiform tuberculides of the extensor aspects on both legs and below the knees. There was no history of tuberculosis in the family. Past history fairly good until five years ago, when this eruption occurred with months of almost complete remissions.

The second case, a boy of seventeen years, was suffering with various skin manifestations associated with tuberculous lesions elsewhere. Father and mother of the boy were healthy and well. Both grandfathers died of tuberculosis, also a maternal aunt. Patient had never been strong, and upon examination was seen to be delicate and poorly nourished. The left hand presented the appearance of dactylitis. Physical signs were negative. There was a suspicious evening rise of temperature, a chronic cough, and night-sweats. Lesions of lichen urticatus were noticed on the trunk. On the legs and below the knees were several deeply-seated lesions the size of a pea to large filbert, the older ones having a bluish-red tinge. One had been pricked and poulticed and had broken down and discharged. The others were intact; one of these was excised for examination.

After a careful histologic study the authors arrive at the following general conclusions: "In the second of the two cases we had the combination of tuberculous clinical appearances (dactylitis) and a tuberculous family history, with a tuberculous histological architecture and the presence of tubercle bacilli, which proves beyond doubt that the cutaneous lesions were the result of the reaction of the tissue to the invasion of the tubercle bacillus. In the first case we had an almost identical histological structure, as a reference to the *resume* of cases will emphasize, and although in this case we were unable to demonstrate the bacillus, the similarity of the histological architecture left little doubt that, like the former case, it also was tuberculous. Indeed, in the hundred and twenty sections we stained for tubercle bacilli, from the similar tuberculous appearance presented by both sets of sections, we thought that we were as likely to find tubercle bacilli in one case as in the other.

"The second striking picture brought out by this report was the condition of the hypodermal vessels. Though several writers have noted changes in those vessels, many others have failed to do so, because they have too often examined the skin alone without cutting sufficiently deep to include the hypoderm in the excision. The *initial* changes in both our cases occurred in the vessels of the hypoderm, and more especially in the veins, where endophlebitis and a general thickening of the walls was usually present. It would have been of particular interest to us if we had succeeded in demonstrating the bacillus within the veins themselves, but as yet we have been unsuccessful in doing so."

Ringworm and Favus.—A. D. MEWBORN, M. D. (*Pediatrics*, vol. xii., No. 7).

—The author in this interesting article discusses the necessity of a ringworm school in New York, where the disease is quite prevalent. He thinks this could be accomplished, and describes in detail the "Ecole Lailler" founded by Sabouraud in 1895 in Paris in the northwestern end of the St. Louis Hospital reservation. This school or institution is for the study and treatment of ringworm and favus cases. These infected children are not only treated, but are taught as in a private school. Outside of their school hours each child has a weekly *seance* with the epilators, of whom there are sixteen. All of the diseased hairs are epilated, as well as a margin of one or two centimeters of healthy hairs around each patch. The rest of the scalp is shaved and rubbed with a solution of tr. iodine, iodide potash and glycerine, and a white cap tied on for protection. Once a week each child must pass under inspection before Dr. Sabouraud or his assistant, when the application of croton oil on a tooth-pick mop is made to the diseased follicles. Three or four months is the average time for cure. Untreated cases may last for five years, and favus ten to twenty years.

Seborrhœa.—Taken from the remarks made by M. SABOURAUD before the Dermatological Section of the Sixty-ninth Annual Meeting of the British Medical Association (*British Jour. of Dermatology*, October, 1901).—Pincus, Pifford, Van Harlingen and Unna have shown that the scale of pityriasis did not come from the depth of the sebaceous follicle, as Hebra had said, but was produced by the exfoliation of the superficial horny epidermis, therefore it is necessary to separate pityriasis essentially from seborrhœa. Pityriasis has a specific cause, a microbic flora, a gray cultured coccus (*morococcus* of Unna) and the bottle bacillus. This may exist without true seborrhœa, and when in connection with the latter is by superposition of the two diseases. Seborrhœa is merely a hypersecretion of the sebaceous glands and nothing more, being exclusively fatty and never scaly. It exists in two forms: a moist type, the seborrhœa oleosa of Hebra; and a cystic type, acne comedo or acne punctata, of all authors. The elementary lesion is a fatty plug, which oozes from the sebaceous follicle when a seborrhœic skin is squeezed. In this fatty plug an enormous number of very small bacilli exist in pure culture.

The second element of seborrhœa, the comedo, which is the cystic formation of the former plug, which becomes infected sooner or later by the common cocci of the skin (the most frequent infective agent being the gray coccus), thus bringing about the various varieties of polymorphic acne. If infected by virulent cocci (staphyl. pyog. aureus), there may ensue the clinical forms called acne necrotica, varioliformis, acneic furunculosis of the neck, etc. Thus we see from seborrhœa we have the various forms of acne, due to the infection of the seborrhœic skin by micro-organisms (the micro-bacillus, morococcus, staphylococcus, etc.). The seborrhœic condition furnishing the soil for their propagation. These diseases occur most frequently during sexual development, the time of the most frequent occurrence of true seborrhœa (hypersecretion of the sebaceous glands). Dr. Sabourand goes on to say the term "seborrhœic eczema" of Unna signifies a hybrid mixture of pityriasis and true seborrhœa, which generally co-exist on the same individual.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

A Practitioner's Treatment of Inflammatory and Ulcerative Conditions of the Larynx.—BEAMAN DOUGLASS (*Post-Graduate*, June, 1901) briefly describes and outlines the general treatment of all inflammatory diseases of the larynx. In acute laryngitis he recommends the following as a quick cure: The patient should be kept in a well-ventilated room at a temperature of 67 to 70 degrees Fahrenheit. Bodily massage given twice daily. The bowels freely moved. The voice rested. The internal administration of 1-20 gr. of tartar emetic every hour until nausea is produced, and a spray of a six per cent. solution of suprarenal gland locally into the larynx.

In croup, inhalations of steam containing menthol or camphor, rubbing the nose, neck and chest with a mixture of turpentine and camphorated oil, and the internal administration of calomel 1-10 gr. every hour for ten doses.

In œdema of the larynx, ice applications, free movement of the bowels and hot foot bath, with local application of suprarenal gland.

Chronic laryngitis yields only after protracted treatment. Any abnormality of the nose and pharynx should receive attention. Locally sprays or injections of solutions of sulphate of zinc or silver nitrate, 5, 10, 15 grains to the ounce.

Tubercular laryngitis is divided into three stages: Beginning cases, which are treated the same as cases of chronic laryngitis; infiltrated cases, in which hypodermic injections of oil of hydrocarbol are made into the infiltrated tissues; and ulcerated cases, in which the ulcers are cauterized either with nitrate of silver in substance or strong solutions of lactic acid.

Specific cases are dealt with along the line of the well-known orthodox treatment.

On the Removal of Tonsils in Adults.—J. LAMBERT LACK (*British Medical Journal*, September 28, 1901) calls attention to the danger which may follow the removal of tonsils in adults, and briefly describes the methods of removal, with their indications. Besides the danger attending all open wounds, tonsillotomy in the adult may be followed by severe hemorrhage which may menace the life of the patient. Another risk attending the operation is the effect it may have upon the voice. Singers sometimes entirely lose their singing voice, public speakers and teachers find they are unable to speak so well or so long as before the opera-

tion, and frequently complain of a hitherto unknown aching feeling in the throat. The methods of removal are:

(1) Removal by ignipuncture with the electric cautery, which is suitable for cases of much enlarged tonsils when removal is not necessitated by recurring attacks of tonsillitis and complete removal is not desirable for fear of injuring the singing voice. Under cocain anesthesia three or four punctures are made in each tonsil, repeated on three or four occasions with a week's interval between each.

(2) Tonsillotomy should never be performed in adults with very large tonsils, because of the danger of hemorrhage, which occurs as often as one out of every three or four cases. In cases with frequent attacks of tonsillitis when the tonsil is too small to be snared it may be removed by cutting instruments.

(3) Removal with the cautery snare leaves a large charred wound in the throat, with increased danger of infection and secondary hemorrhage.

(4) Removal with the cold wire snare is the only method applicable to cases of much enlarged tonsils, possessing great advantages over all other means. The removal is more complete, and if the snare be tightened slowly all immediate bleeding is prevented, and there is but slight danger of secondary hemorrhage. Though painful, it is easily borne under cocaine anesthesia.

(5) Enucleation by incision through the mucous membrane between the anterior pillars of the fauces and the anterior border of the tonsils, through which the finger or blunt instrument is introduced and the tonsil shelled out of its bed, care should be taken to keep outside of the tonsil capsule. This is but loosely attached to the surrounding areolar tissue. General anesthesia is advisable. The advantages of this method are the complete removal of the tonsil, a point of importance in cases of frequently recurring attacks of tonsillitis, in some cases of flat tonsils it being the only practical method.

In conclusion he urges that no routine method be adopted in dealing with tonsils in adults.

Acute Amygdalitis: Its Treatment by the Local Application of the Tincture of Iodine.—S. FLOERSHEIM (*New York Medical Journal*, October 5, 1901) gives an account of the marvelous results he has had in the treatment of acute catarrhal and follicular amygdalitis with the tincture of iodine.

Sixty-eight cases in all were treated with good results. The method used was simply to saturate a long camel's-hair brush with the tincture of iodine and rapidly brush over the inflamed area. Should the burning pain which usually follows last longer than a few minutes, a gargle of plain water is given and the pain soon subsides. A second application is then made. If after twenty-four hours there had been no marked improvement, another application was made, but in many cases one treatment was all that was required.

Recurrent Papillomata of the Larynx in an Adult Treated Locally by Formalin.—ADOLPH BRONNER (*British Medical Journal*, September 28, 1901) reports a case of recurrent papillomata of the larynx in a man of forty-five, in which he had removed the growths four different times during a period of three years, recurring each time, until he began to spray the larynx with a solution of formalin, at first 1-1000, then up to 1-100. There has been no recurrence of the growths during the past two years.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

Concerning the Treatment of the Apparently Unaffected, or at Most But Slightly Involved, Eye in Cases of Glaucoma.—G. E. DE SCHWEINITZ (*Phil. Med. Jour.*, September 21, 1901).—In a very suggestive paper De Schweinitz reviews the possibilities of management of the unaffected or slightly involved eye in the four varieties of primary glaucoma—*e. g.*, acute, chronic congestive, chronic non-inflammatory (simple), and absolute glaucoma.

In general, operative treatment (iridectomy) is advocated as giving the "best and most permanent results in the treatment of glaucoma." The acute, chronic congestive and chronic non-inflammatory types should be clearly differentiated in order that appropriate therapeutic measures may be instituted. The danger of procrastination in the operation of glaucomas amenable to iridectomy or sclerotomy is insisted upon. The dictum of Rochon-Duvignaud—"the excretory angle of the eye (iritic angle) is intact at the time of the first attack of glaucoma, but is obliterated at a more advanced period of the affection. Iridectomy will be efficacious *before the root of the iris is welded to the cornea; otherwise not*"—is accepted as a clear exposition of the probable permanent result of iridectomy in any given condition of glaucoma.

With rare exceptions, all forms of glaucoma are bilateral. In certain cases, however, a very long period (from one to ten years) may intervene the attacks in the two eyes. Very rarely the disease may be truly monolateral (glaucoma simplex, glaucoma absolutum). The following questions are propounded:

1. *What shall be done for the apparently sound eye after the first eye has been operated on for acute glaucoma?* As the operation not unusually precipitates an attack of acute glaucoma in the fellow eye, a good rule is to keep the non-affected eye under the influence of a myotic until the eye upon which an operation has been performed is entirely healed and free from irritation." The following signs have been suggested as a means of determining whether the apparently sound eye is in reality in the beginning of glaucoma:

(a) "Shallowness of the anterior chamber and beginning opacity in the lens with swelling and a high degree of hypermetropia and smallness of the corneal diameter."

(b) "The mydriatic test consists of the instillation of a solution of homatropine into an eye that is under suspicion, and noting whether it produces any rise in intraocular tension, or pulsation of the blood vessels of the fundus."

(c) "The palpation—that is, an observation is made whether finger-pressure on the globe so slight that in a healthy eye it does not cause pulsation of the blood vessels of the fundus does cause them to pulsate in the eye under suspicion."

(d) "The history of prodromal glaucomatous phenomena."

If these tests are positive, "an iridectomy should be performed as soon as the anterior chamber is restored upon the opposite side."

2. *What shall be done with the apparently sound eye after the first eye has been operated upon for chronic glaucoma?* A case of chronic congestive glaucoma approaching in type a glaucoma simplex is described: In January, '96, male, age 42, began to see "rainbow rings" around artificial lights with right eye. Fundus normal, fields of normal dimensions. Close work for long periods was forbidden and he was given a solution of eserine to use in case the signs of acute glaucoma appeared. In fall of 1896, "rainbows" had increased in frequency and were more per-

sistent. V. normal on clear days. Field normal. T + (?). Ophthalmoscope showed central cupping of nerve-head. In June, 1898, the conditions had not changed.

The patient absented himself until February, 1901, when right eye V. = .2. T + 1. Nasal field lost. "Rainbow" rings had begun to be noticed before the left eye. Vision and field normal. In May, 1901, right eye showed almost complete loss of nasal and lower field, with a semicircular scotoma. Left eye showed beginning contraction of field, particularly on the nasal approach.

In such a condition iridectomy "would seem to be indicated as soon as the 'rainbow' vision was certainly associated with the attacks of increased intra-ocular tension" in order to "prevent the decided change from the prodromal to the more fully developed glaucomatous stage."

3. *What shall be done with the apparently sound eye after the first eye has been operated upon for chronic simple glaucoma?* Most cases of glaucoma simplex are bilateral from the start; rarely, however, one eye is markedly glaucomatous, where the other, although exhibiting a glaucomatous excavation of the nerve-head, still retains normal central and peripheral vision. Very careful perimetric examination of these cases will often reveal a nearly central scotoma which has a tendency to become annular, as well as a very slight nasal contraction. The writer believes iridectomy may, under these circumstances, properly be urged.

Beginning cupping on the temporal side of the disk, periods of increased intra-ocular tension and alteration in the visual fields are signs indicative of the beginning of trouble in the fellow eye. The search for scotomata should be diligent, as their study furnishes a prognostic guide of value. (a) The rare topographically different from those which occur in simple atrophy. (b) They are often the forerunners of subsequent defects in the peripheral visual field.

4. In the presence of absolute glaucoma of one eye the writer accepts the dictum of Fukala, who says: "In case the glaucoma of the first eye is already absolute, one should perform an iridectomy upon the second eye before the outbreak of the disease, at least when the suspicion that there will be an outbreak exists."

BOOK REVIEWS.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By JOHN V. SHOEMAKER, M. D., LL. D. Fourth edition. D. Appleton & Co., 1901.

The fourth edition of this excellent and popular treatise brings the text thoroughly up to date, and embellishes it with some new drawings and illustrations. The most pleasing feature to us is the space allotted to therapeutics. We have seen no work upon this subject which discusses so thoroughly and clearly the treatment of skin diseases. Happily, the author from his wide knowledge of general therapeutics is particularly fitted for the task.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc., etc. Volume III. September, 1901. 8vo. 428 pages. Lea Brothers & Co., Philadelphia and New York. Issued quarterly. Price: Cloth, \$10.00 per year.

This volume contains the following monographs: Diseases of the Thorax and its Viscera, including the Heart, Lungs and Blood Vessels, by William Ewart, M. D., F. R. C. P.; Dermatology and Syphilis, by William S. Gottheil, M. D.; Diseases of the Nervous System, by William G. Spiller, M. D., and Obstetrics, by Richard C. Norris, M. D.

This new issue keeps up well with the high standard of the previous volumes. The American and foreign publications reviewed therein are most carefully selected, and thus the synopsis of the progress made in each branch admirably complete.

DISEASES OF THE INTESTINES. By DR. I. BOAS, Specialist for Gastro-Intestinal Diseases in Berlin. Authorized translation from the first German edition, with special additions by SEYMOUR BASCH, M. D. 560 pages. 8vo. D. Appleton & Co. Price: Cloth, \$5.00.

The popularity of Dr. Boas' treatise in German has led to this translation. It is adapted principally to meet the needs of the general practitioner, but thorough description of physiologico-chemical processes and laboratory methods make it also valuable to scientific investigators in this line of work. Special additions to the chapters on appendicitis and hydrotherapeutics have been made by the translator.

A LABORATORY COURSE IN BACTERIOLOGY. For the use of Medical, Agricultural and Industrial Students. By FREDERIC P. GORHAM, A. M., Professor of Biology, Brown University; Bacteriologist to the Health Department, Providence, Rhode Island. 12mo volume of 198 pages, with 97 illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$1.25, net.

Bacteriology is essentially a laboratory study. It is only by actual laboratory work that it can be taught in such a manner as to serve any useful purpose. It is also a subject of very general scientific interest. Courses in bacteriology are no longer confined to the medical schools, but are being introduced into colleges and agricultural and industrial schools.

This work lays out a good course in bacteriology. It furnishes a good working manual for practical laboratory work. It gives in detail routine pro-

cedures, and its chief merit lies in the fact that the various steps in practical work are fully explained. Most text-books on bacteriology are lacking in what this book consists. Hence it can be recommended to students.

ATLAS AND EPITOME OF SPECIAL PATHOLOGIC HISTOLOGY. By Dozent Dr. HERMANN DUERCK, of the Pathologic Institute of Munich. Edited by LUDVIG HEKTOEN, M. D., Professor of Pathology in Rush Medical College, Chicago. Vol. II.—Liver; Urinary Organs; Sexual Organs; Nervous System; Skin; Muscles; Bones. With 123 colored illustrations on 60 lithographic plates, and 192 pages of text. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$3.00, net.

This volume continues the subject of Pathologic Histology in the Saunders Series of Hand-Atlases, and is, if anything, even handsomer than its companion volume, issued some months ago. The colored lithographs of this volume are beautifully reproduced, and are extremely accurate representations of the microscopic changes produced by disease. The great value of these plates is that they represent in the exact colors the effect of the stains which are of such great importance for the differentiation of tissue.

The volume is an important adjunct to the teaching of pathology. It is terse and impressive. It will serve as a substantial manual for students of medicine.

EICHHORST'S PRACTICE OF MEDICINE. A Text-Book of the Practice of Medicine. By DR. HERMAN EICHHORST, Professor of Special Pathology and Therapeutics, and Director of the Medical Clinic in the University of Zurich. Translated and Edited by AUGUSTUS A. ESHNER, M. D., Professor of Clinical Medicine in the Philadelphia Polyclinic. Two octavo volumes of over 600 pages each; over 150 illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Price, per set: Cloth, \$6.00, net.

In view of Eichhorst's prominence as an authority on internal medicine, his exhaustive work on "Special Pathology and Therapeutics" was received with general satisfaction. His students, however, demanded of their master a work less voluminous, more concise, and yet a text-book meeting all of the requirements of the student and practitioner. This unanimous desire has been gratified through the publication of "Eichhorst's Practice of Medicine," practically a condensed edition of his larger work. This volume has been translated by Augustus A. Eshner, M. D., and for the sake of convenience divided into two volumes.

The first volume deals with diseases of the circulatory organs, the respiratory tract, the digestive organs, the genito-urinary organs, and, in part, with diseases of the nervous system.

Volume two takes up the nervous system, muscles, skin, spleen and blood, the disorders of metabolism and infectious diseases. A number of subjects, such as the skin, venereal diseases, impotence, sterility, etc., omitted from most text-books of this kind, are given due attention by the author of this work. He has succeeded in condensing much information in little space. The sentences are short, concise, and to the point. There are few repetitions and no superfluous statements. For the practitioner of medicine the work is ideal; as a text-book for students, but one criticism could be offered: its conciseness may at times presuppose knowledge which he does not possess. In view of the other extremes, however, indulged in by authors of text-books, this may be considered a virtue rather than a fault.

HUMAN PHYSIOLOGY. Prepared with Special Reference to Students of Medicine.

By JOSEPH HOWARD RAYMOND, A. M., M. D., Professor of Physiology and Hygiene in the Long Island College Hospital, and Director of Physiology in Hoagland Laboratory, New York City. Second edition, entirely rewritten and greatly enlarged. Handsome octavo volume of 668 pages, 443 illustrations, twelve of them in colors, and four full-page lithographic plates. Philadelphia and London: W. B. Saunders & Company, 1901. Cloth, \$3.50, net.

Since the first edition of this work scientific research has made such rapid progress in the study of human physiology, that the author deemed it imperative entirely to rewrite the work. In the extensive revision the same general subdivision of the subject has been retained, adding, however, a section on histology, which will be found fully adequate for a thorough understanding of the physiologic anatomy of the organs whose functions are under discussion. Special attention has been given to the influence of alcohol upon mouth and gastric digestion, to the subject of deglutition and the gastric movements as observed by use of the Röntgen rays, and to the physiologic significance of gastrectomy.

Internal secretion, thyroid treatment, blood coagulation, fat absorption, and the most recent contributions on the genesis of uric acid has been concisely, though thoroughly, considered.

Laryngeal Photography, by Professor French, and the subject of voice production have been extensively discussed, elucidating the text by numerous well-selected illustrations.

In the portion of the volume devoted to the nervous functions, many changes have been introduced, necessitated by the general acceptance of the "neurone theory;" and the sections treating on the senses of sight and hearing have also been greatly elaborated.

We fail to see reference to the bactericidal and other properties of even normal human blood as has been recently investigated. The size of some chapters to others is hardly proportionate to their importance. Fifty pages are devoted to the sense of sight, and only seven to vital heat.

Altogether a very useful work.

PATHOLOGICAL TECHNIQUE. A Practical Manual for Workers in Pathological

Histology, including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By FRANK P. MALLORY, A. M., M. D., Associate Professor of Pathology, Harvard University Medical School; and JAMES H. WRIGHT, A. M., M. D., Instructor in Pathology, Harvard University Medical School. Second edition, revised and enlarged. Octavo, 432 pages, with 137 illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$3.00, net.

In revising the book for the new edition the authors have kept in view the needs of the laboratory worker, whether student, practitioner or pathologist, for a practical manual of histological and bacteriological methods in the study of pathological material. Many parts have been rewritten, many new methods have been added, and the number of illustrations has been considerably increased. The majority of the latter are beautiful original photomicrographs of various species of bacteria.

It is by far the best book in the English language on pathological technique. While much therein has been borrowed from German literature, still the work has its sphere of usefulness for those who do not read German.

INTERSTATE MEDICAL JOURNAL.

VOL. VIII.

DECEMBER, 1901.

NO. 12.

ORIGINAL ARTICLES

PENETRATING WOUNDS OF THE HEART WITH SUTURING OF THE WOUNDS—REPORT OF A CASE.*

BY H. L. NIETERT, M. D., of St. Louis, Missouri,

SUPERINTENDENT AND SURGEON IN CHARGE, ST. LOUIS CITY HOSPITAL.

(WITH TWO ILLUSTRATIONS.)

Wounds of the heart penetrating into one of the cavities where hemorrhage was checked by suturing are extremely rare. They are rare by reason of the fact that patients usually bleed to death before surgical aid can be rendered, and also because of the hesitancy on the part of the surgeon in deciding upon the operation, this class of wounds being looked upon as almost universally fatal. From the best information obtainable there are twenty-two of such cases on record. The history and descriptions in some instances, however, are so incomplete that it is a question whether all belong to this class of cases.

In reviewing these reports it is noticed that the suturing is usually performed several hours after the injury, showing that there must have been present some condition which retarded the flow of blood sufficiently to allow time for the surgeon to act. It is this condition, to my mind, that makes these wounds most interesting, and not so much the surgical skill required in suturing them. The case which came under my observation and a report of which follows entered the hospital at 6:00 P. M. on April 20, 1901, with a history of having been stabbed two hours prior to admission. The patient was a young man, twenty-two years of age, well developed, and weighing about one hundred and eighty pounds. He was in an unconscious condition, and all information had to be obtained from an officer who accompanied him. According to the officer's statement, patient during an altercation with another man had been stabbed in the chest with a knife. It was also learned that after the injury patient ran a distance of one hundred feet, when he fell exhausted and unconscious. After the infliction of the wound and up to the time of admission friends of the patient made repeated attempts at reviving him, and failing in this had him forwarded to the hospital.

General inspection showed the skin and lips very pale, breathing shallow but regular, and patient lay quietly and senseless on the operating-table. A knife wound was noticed three-quarters of an inch in length and situated at a point corresponding to the fifth intercostal space on the *right* border of the sternum,

* Published synchronously with *Philadelphia Medical Journal*.

Wound was filled with small clots of blood and the bleeding from it amounted to about as much as one would expect from a small superficial skin wound, and did not impress one as being connected in any way with the heart.

The physical examination, however, revealed the true nature and depth of the wound, and that an internal hemorrhage was taking place. The pulse was imperceptible. No apex beat could be found. Examination of the femoral arteries elicited a slight pulsation of those vessels. A feeble pulsation could also be detected in the carotids.

Percussion showed an area of heart dullness bounded on the right by the right border of the sternum, above by the third rib, and on the left by the nipple. The increased area of dullness indicated, to my mind, that a hemorrhage was taking place into the pericardial sac. The question arose whether the right pleural cavity had been opened, and if so, how much bleeding was taking place into that cavity. Percussion over the right chest, however, outlined the lung in its normal area.

Auscultation showed a muffled sound over heart area and the heart-beat barely audible. The sounds made the impression that the heart was farther from the ear than normal. The contractions at this time were irregular and numbered about 120 per minute. Careful auscultation did not make it possible to hear any splashing or whizzing sound, indicating again that there was no air present, and therefore no connection with the pleural cavity or lung. No abnormal signs were audible over any portion of the lungs.

An immediate operation was decided upon, and after the usual preparations a semi-circular incision was made in the skin over the sternum, with the base of the flap toward the left side. The cut was made through the stab wound and laid bare the bony wall to the extent of about three inches in diameter. The patient being unconscious no anæsthetic was necessary. On raising the flap it was found that the knife had penetrated between the fifth and sixth ribs, immediately to the right edge of the sternum. It was decided to follow the recommendation of E. Giordano in his surgery (*La Chirurgie del pericardie e. del Cuore*), where he advises, first, to follow canal of wound to pericardium and heart rather than make an osteoplastic flap, as it might be sufficient to stop hemorrhage through a small opening in this way. The cartilages of the fifth and sixth ribs on the right side were severed near the sternum, then by means of the *rongeur* a sufficient portion of the sternum was removed to bring the cut in pericardium plainly into view. A cut three-fourths inches in length was found in pericardium, from which very little blood flowed, as a large clot was lying immediately behind, preventing the escape of any liquid blood. With the finger introduced into the pericardium I could feel the cut in the heart. In order to be able to approach this wound it was thought necessary to enlarge the opening in the sternum, which was done so that it measured two inches in diameter, the pleura being left intact. The edges of the cut in pericardium were then seized with forceps and the wound enlarged, making it two inches in length. That a high pressure existed in pericardium was shown by the fact that the blood spurted from the cut, carrying with it large coagula. The heart, which had hitherto acted feebly, was now becoming more forcible and began to press the blood clots forward.

It was noticed that the thickest layer of coagulated blood was found against the posterior surface of the heart, and was removed partly by means of the finger hooked around the heart and partly by a stream of physiological salt solu-

tion poured into the sac. After removal of all the clots the heart-beat was 100 per minute, regular and forcible.

The hemorrhage from the heart during all this time was controlled by pressing the tip of the finger into the cut. Before suturing the edges of the wound, the bleeding from the wound was carefully observed and it was noticed that it occurred mostly during diastole and almost ceased during systole. The wound in the heart measured one-half inch in length, the line of the cut running parallel to the longest diameter of the heart, and was situated in the center of the wall of the right ventricle; the blade seemed to have penetrated it obliquely.

In order to facilitate the suturing of the heart, the edges of the cut were seized by two narrow Kocher forceps and the organ drawn forward into the opening in the sternum and held there until the first suture could be introduced, after which forceps were removed and the heart was held by the suture. Three interrupted silk sutures were required to stop the bleeding, care being taken on introducing the needle not to include the endocardium. The knots were drawn together and tied during diastole. The patient was then heavily stimulated by injections of whiskey, strychnine and physiological salt solution.

While suturing the heart patient became conscious and conversed in a perfectly rational manner; he discussed the injury and on inquiry stated that he felt no pain, nor was any perceptible shock noticed while the heart was being manipulated.

The pericardium was partly closed and a small drain of plain gauze introduced. The flap of skin was stitched back with the exception of a small opening for drain.

POST-OPERATIVE COURSE.

Immediately after the operation patient's temperature was 98°; pulse, 110; respiration, 30.

At six o'clock the next morning patient had a temperature of 98°; pulse, 120; respiration, 30, and was resting fairly well. Was most comfortable with chest elevated to almost sitting posture.

During the entire course of treatment patient was regularly stimulated with whiskey and strychnine. Hypodermic injections of physiological salt solution were administered every three hours.

Patient had a complete suppression of urine, as repeated catheterization of bladder did not furnish enough to enable us to make a urinalysis. In order to favor the action of the kidneys, hot applications were made to the body and enteroclyses of hot water were given every three hours, but without any results. About thirty-two hours after the operation the patient's condition suddenly grew worse. Temperature rose to 104°; pulse became very rapid. Patient died thirty-three hours after operation, having remained conscious up to the last moment.

POST-MORTEM EXAMINATION.

This was made under the direction of Dr. Funkhouser, the coroner of St. Louis, and showed all the organs, except the heart and pericardium, in a normal condition. I am extremely sorry that no report could be obtained as to the condition of the kidneys, as I feel satisfied that abnormalities would have been found in that organ.

The pericardial sac was found to be completely obliterated and a fibrinous

exudate covered the entire heart. Removal of the lymph exposed a highly injected pericardium, which was very cloudy in appearance. The edges of the wound in heart were agglutinated, and the sutures, three in number, were intact and were covered with a layer of lymph.

The right ventricle was then opened by a v-shaped incision, so that the entire wall was left intact with wound in the center, as shown in the cut.

The endocardium was found to be smooth and retained its normal luster. The heart muscles appeared soft and flabby. The cut in the endocardium was about one-half inch in length, was parallel to and situated between two *columni carnea*, which were lying close together in anterior wall of ventricle, so that the wound on inside could not be seen until these masses of flesh were drawn apart. The edges of the wound were noticed to have become agglutinated and showed no inflammatory changes.

The cause of death, from post-mortem findings, was given as shock and pericarditis.

The case, although terminating fatally, presented numerous points of interest. In the first place, our patient was unconscious, not from the shock or loss of blood, but from the circulatory disturbance caused by the compression of the heart. The unconsciousness was to the extent that permitted of operation without an anesthetic. The moment the pressure was removed consciousness was restored completely.

It was the first case operated upon in which no injury existed to the pleura, and hence no communication between the pleural cavity and the pericardial sac. In the other twenty-two cases reported, the pleural cavity had been opened on the left side in twenty-one cases, on the right side in one case. There was, therefore, in all those cases a direct flow of blood from the heart through the opening in the pericardium into the pleural cavity. In the present case the blood, being unable to escape, caused a gradual increase of intra-pericardial pressure and a steadily growing weakness of the heart, hence the patient was pulseless and heart-beat barely audible. And yet the pressure was not sufficient to cause a stasis and cyanosis, which so often precedes death in similar wounds. Cohn-heim¹ demonstrated in his experiments on animals that hemorrhage of this kind caused a compression mainly of the auricles and large vessels, damming back the blood and preventing its flow into the ventricle, thus producing a marked cyanosis. This was not visible in our case, and was perhaps due to the fact that bleeding took place chiefly during diastole, and very little blood flowed directly from cavity during systole. Although pressure was increased somewhat, it was not to the extent of complete compression of the auricles. There was an absence of that splashing sound in the region of the heart, which is so frequently described by surgeons in connection with the reports of their cases.

I should like to suggest the following explanation for this striking fact: I have observed and operated upon four cases of penetrating wounds of the pericardium in which there was a bleeding into the pericardial sac. In these four cases there was a communication of the sac with the pleural cavity, and in each instance the splashing sound was audible. I conclude, therefore, that the absence of the sound is due to an increased intra-pericardial pressure, produced by an accumulation of blood. This accumulation is due to the absence of an avenue of escape, there being no communication with the pleural cavity. Therefore the splashing sound, audible over the region of the heart in injuries of this kind,

seems to be an important sign in connection with the diagnosis, as it determines whether the pericardial sac communicates with the pleural cavity or not.

The whizzing sound described by surgeons in connection with these cases, which indicates the presence of air in the pericardium, was also absent in our case.

The fact that the wound in our case was extra-pleural, made it advisable to perform the suturing through the extra-pleural route. In all other cases reported, either the right or left pleura was injured, and the operations were performed through the intra-pleural route. The avenue of suturing was therefore different from any heretofore. It was performed through an opening two inches in diameter without any difficulty, the heart being held with forceps and drawn up to the opening while the first suture was being applied. Not the slightest tearing was produced, nor did any shock follow the application of the instruments.

Another point of interest was the fact that the knife penetrated on the right side of the sternum. With the exception of the case reported by Watten in *Deutsche Med. Wochenschrift* (Leipzig), September 5, 1901, all the wounds were found on the left side of the sternum.

The direction and position of the wound in the heart was also an extremely interesting feature in the case, and was such as permitted of the least amount of hemorrhage. The knife had penetrated the heart muscle obliquely, the direction being that of the staff as shown in figure I. Elsberg, in *Journal of Experimental Medicine*, September, 1899, reports the result of his experiments on animals, and showed conclusively that oblique wounds bled far less than perpendicular ones, as in this form the canal of the wound is longer and favors the formation of small clots. "Then, too, in oblique wounds the surfaces are more tightly pressed against each other during the systolic contraction of the part." But this was not the only favorable circumstance in our patient's wound. The main factor and which, in my opinion, prevented our patient from rapidly bleeding to death, was the position of the cut in the endocardium. As stated above, it was about one-half of an inch in length and situated between and parallel to two *columni carneæ*, and in order to see the wound it was necessary to draw apart the columni. It was observed during the operation that only a small hemorrhage took place during systole, which was undoubtedly due to the pressing together of the columni, acting as valves to the opening. Since the hemorrhage occurred mainly during diastole, it must necessarily decrease as the pressure in the pericardium increased. In this way the wound was pressed against from both sides, and it is likely that this condition served to keep our patient alive for over two hours.

The experiments of N. Napolkaw,⁸ Delorme, Elsberg and others¹ were also borne out in this case in regard to the size and position of the clot of blood in the pericardium, namely, that the thickest portion of it was found back of the heart. The front of the heart was covered with a layer not thicker than one-fourth of an inch, while that lying against the posterior portion of the heart was at least three-fourths of an inch in thickness.

METHODS OF OPERATION.

Different methods have been devised for suturing the heart, and surgeons have divided them into two classes: one the extra-pleural, in which an osteoplastic flap is made of the sternum; the second the intra-pleural method with osteo-

plastic flaps, laying back one or more ribs. In the first method the pleura is left intact, while in the second the pleural cavity is always open. The first method has been described and advocated by von Rydygier² and Giordano.³ The method of von Rydygier consists of an osteoplastic flap made as follows:

The first incision, made transversely across the sternum on a level with the lower border of the second rib, extends from the right to the left border. A second cut is made parallel to the first on a level with the fifth rib; the two are united by a third incision, running parallel to the left border of the sternum. The cartilages of the third and fourth ribs on left side are then divided, as is also the sternum, and the entire flap forcibly pulled toward the right side.

The one by Giordano consists of an osteoplastic flap with a hinge on the left side of the sternum, and includes a section of the sternum extending from the attachment of the second rib down to the fourth.

Statistics gathered by Fischer and Loison⁴ have shown that the large majority of wounds of the heart have occurred in the ventricle. I have been able to find only one case, that reported by E. Giordano, in 1898, in which the auricle was injured.

With a view to obtaining a flap which would lay bare a large portion of the heart, and especially the ventricles, and thus cover the large majority of cases, I have in some twenty sections on the cadaver outlined a flap which seems to answer all purposes. It includes that portion of the sternum extending from a point on a level with the lower border of the cartilage of the third rib down to the articulation of the gladiolus with the ensiform cartilage. An incision is made from the right border of the sternum transversely across on a level with the lower border of the third rib to a point about one inch to the left of the sternum. A second cut is made from the right border of the sternum across to a point one inch to the left of the sternum and on a level of the articulation of gladiolus with the ensiform. The left extremities of the two cuts are united by a perpendicular incision. The cartilages of the fourth, fifth and sixth ribs are divided, care being taken to remain close to the cartilages, particularly that of the fourth, as the pleura usually lies closely attached to that rib. It is an easy matter then to loosen with an elevator the tissues from the posterior surface of the sternum, as the pericardium is only loosely attached, and there is at no time any danger of injuring the pericardium.

With a cartilage saw and the costotome the sternum is readily divided. However, care should always be taken not to allow the instrument to pass beyond the right border of the sternum, as there is great danger of injuring the right pleura, which lies immediately back and comes up to the right border of the sternum. I have found it safest, after the sternum had partly been divided, to pass the finger back of the sternum and push away the right pleura before dividing the entire sternum. After dividing these bony structures the entire flap is forcibly turned toward the right side, and the cartilages on the right side partly broken (as shown in figure II). By this method a good view can be obtained of the heart, with the exception of the upper portion of the auricles and the beginning of the great vessels. It exposes the anterior surface fairly well, and that is usually all that is desired in the extra-pleural method, since in those cases where the side of the heart is injured the pleura will be found to be penetrated also, in which case the intra-pleural method will be the more advisable operation.

For the intra-pleural method the one devised by Rotter⁵ seems to me to

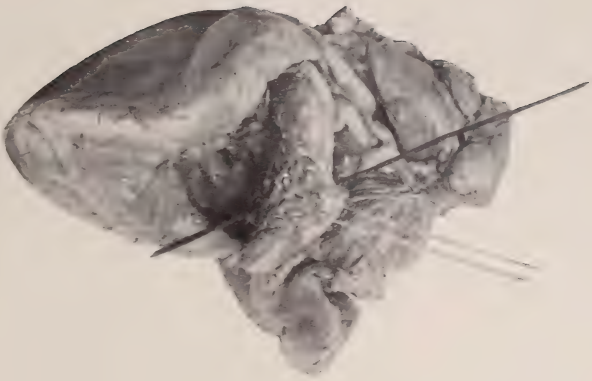


FIG. I.

Photograph of heart. The right ventricle is opened by V-shaped incision. The staff passed through the wound indicates the direction of the canal.



FIG. II.

The extrapleural method. An osteoplastic flap, which includes a section of the sternum with a division of the fourth, fifth and sixth costal cartilages on left side. The pericardium is opened and the edge held back by means of a string. The heart is seen in the depth of the wound.



be the best, as it lays bare the greater portion of the heart, and is the most rapidly performed with the least amount of hemorrhage. It consists of an incision extending from the left border of the sternum, parallel to the third rib outward about two inches. A second incision is made on a level with the sixth rib, and extending from the left border of the sternum to a point two inches toward the left side. A third incision connects the outer ends of the two incisions. The third, fourth and fifth ribs are then divided in the line of incision, as are also the muscles and pleura. The entire flap is then forcibly turned toward the right side, and the cartilages broken near the sternum. In this way the right ventricle and a large portion of the left can be brought clearly into view. The hand can readily be passed into the chest cavity, and the heart grasped or pressed forward to facilitate the suturing.

Since out of the twenty-two cases reported twenty-one wounds were inflicted on the left side of the sternum, all injuring the pleura, it seems to me to be the operation that would cover the large majority of cases. I had occasion to perform the operation a number of times on the cadaver, and recently performed a slight modification of it on a patient whose left ventricle had been penetrated by a knife. In this case the suturing was performed with little difficulty. The operation was performed four weeks ago, and as the patient is still under observation and not completely recovered at this writing, the case is not included in this report.

Other operations of the intra-pleural method have been devised by Pamoni and Parrozzani,² but differ only slightly from Rotter's operation.

Although it is advisable for the surgeon to be familiar with all the methods in use, it seems to me that a thorough knowledge of the anatomical relations is of the most importance. Thus Watten, who had to deal with a stab wound on the right side of the sternum in the fourth intercostal space, in which the pleura was injured, made a flap including the third and fourth ribs on right side, and turned them outward. He claimed that this opening gave him ample room to suture the wound, which was located in the right ventricle. It is, therefore, impossible to lay down any definite rule for exposing the heart, and each operator should be guided by the position and direction of the wound.

I have been able, as mentioned above, to collect from various records twenty-three cases of penetrating wounds of the heart where suturing was performed. This number includes my own case. The following are brief reports of the names of the operators, year of operation, position of the wound, and result:

1. Cappellen,⁶ operation performed in 1896, wound located in the fourth intercostal space on left side of the sternum; patient died.

2. Farina,⁶ operation performed in 1896, wound located in fifth intercostal space, left side of sternum, penetrating left ventricle; patient died.

3. Rehn,⁶ operation performed in 1897, wound located on left side of sternum, in fourth intercostal space, injuring the right ventricle; patient recovered.

4. Parrozzani,⁶ operation performed in 1897, wound located in seventh intercostal space, left side, injuring left ventricle; patient recovered.

5. Parrozzani,⁶ operation performed in 1897, wound located in third intercostal space, left side, injuring left ventricle; patient died.

6. Parlavecchio,⁶ operation performed in 1898, wound located in fifth intercostal space, left side of sternum, injuring left ventricle; patient recovered.

7. Ninni,⁶ operation performed in 1898, wound located in fifth intercostal space, left side of sternum, injuring the left ventricle; patient died.

8. Giordano,² operation performed in 1898, wound located in second intercostal space on left side of sternum, injuring left auricle; patient died.

9. Pagenstecher,² operation performed in 1899, wound located in fourth intercostal space on left side of sternum, injuring the left ventricle; patient recovered.

Cases 10, 11 and 12, reported by Horodynski and W. Maleszewski in *Medycyna*, 1899, and operated upon by Kosniski,⁹ are as follows:

10. Wound located in third intercostal space on left side of sternum, injuring the left ventricle; patient died.

11. Wound located in third intercostal space on left side, injuring the right ventricle; patient died.

12. Wound located in fifth intercostal space on left side, injuring left ventricle; patient died.

13. Nicolai,⁶ operation performed in 1899, wound located in fourth intercostal space on left side of sternum, injuring right ventricle; patient died.

14. Tuzzi,⁶ wound located in fourth intercostal space on the left side, injuring left ventricle; patient died.

15. Longo,⁶ wound located in fifth intercostal space on left side of sternum, injuring left ventricle; patient died.

16. Ramoni,⁶ wound located in third intercostal space on left side of sternum, injuring left ventricle; patient recovered.

17. Rosa,⁶ operation performed in 1899, wound located in fifth intercostal space on left side, injuring left ventricle; patient recovered.

18. Marion,⁷ wound located in fifth intercostal space, injuring right ventricle; patient died.

19. Maselli,⁶ operation performed in 1900, wound located in sixth intercostal space on the left side, injuring left ventricle; patient died.

20. Nanu (Bukarest),¹⁰ operation performed in 1900, wound located in third intercostal space, left side, injuring left ventricle; patient died.

21. Watten² reported stab wound of right ventricle penetrating fourth intercostal space on right side; patient recovered.

22. Case reported above, operated upon April 20, 1901, wound located in fifth intercostal space on right side, injuring the right ventricle; patient died.

23. Dr. George Tully Vaughn, operation performed October 12, 1901, wound located on left side in fifth intercostal space, injuring left ventricle; patient died. [A report of this case was read before the Virginia State Medical Society, November 5, 1901.]

From the above report it is seen that out of the twenty-three cases, sixteen died and seven recovered. Wound was located on right side of sternum in two cases, on the left side in twenty-one cases. Pleura was injured in twenty-two cases, and uninjured in one case. Left auricle was penetrated in one case, right ventricle in six cases, left ventricle in fifteen cases. In one case the report does not state what part of the heart was injured.

It is my firm belief that in the future operations on the heart for penetrating wounds will be more frequently performed. The idea that the surgeon is powerless when it comes to treating wounds of that organ, must necessarily lose ground, in view of the good results obtained in some of the cases operated upon.

Statistics show that more than ninety per cent. of all heart wounds not operated upon prove fatal. The mortality in the above reported operated cases, although they must be classed among the most serious of heart wounds, is only seventy per cent.

Many years ago Billroth is reported to have said that no surgeon should attempt to suture the heart if he wished to retain the respect of his fellow physicians. Surgery of the heart has advanced far since the time that remark was made. It is beyond doubt that the same authority would consider operative interference advisable in a great number of cases were he still with us. I believe the surgeon is justified in attempting to stop a dangerous hemorrhage from the heart by suturing the wound, just as he would stop a hemorrhage from a vessel by ligation. All wounds of the chest where life is endangered from internal hemorrhage should be explored to the bottom if, in the judgment of the surgeon, the parts are accessible. That the greater portion of the heart is accessible has been clearly demonstrated.

LITERATURE.

1. Elsberg: *Journal of Experimental Medicine*, September, 1899.
2. Watten: *Deutsche Med. Wochenschrift*, September 5, 1901.
3. *Centralblatt f. Chirg.*, No. 18, 1899.
4. Mentioned by Elsberg, No. 1.
5. *Muench. Med. Wochenschr.*, January 16, 1900.
6. Mentioned by L. L. Hill, *Medical Record*, December 15, 1900.
7. *Presse Medical*, No. 2, 1899.
8. *Centralblatt f. Chirg.*, No. 23, 1900.
9. *Ref. Centralblatt f. Chirg.*, No. 7, 1900.
10. *Centralblatt f. Chirg.*, No. 48, 1900.

SOME FACTS ABOUT TETANUS-ANTITOXIN.

BY C. FISCH, M. D., of St. Louis, Mo.

There are three reasons why the recent tetanus calamity that has befallen our city has not resulted in many more fatalities than the thirteen deaths reported to the health authorities. These reasons are:

1. The use of tetanus-antitoxin.
2. The fact that the contaminated serum producing the disease contained just enough toxin to prove fatal to a certain weight of human tissue.
3. The observation that a great number of immunizing doses of this serum have been administered per os, and therefore did not exert their toxic effect.

Every one of these three points brings before us features of the utmost interest, and I shall deal with them in succession as succinctly as I can.

I. Our literature is teeming with contradictory reports about the value of antitoxin treatment in tetanus. The percentage of failures certainly is greater than that of recoveries, and the critical observer is ever skeptical as to the latter. We have for a long while known that patients suffering from tetanus not rarely have recovered before the antitoxin era, and even certain rules have been established as to the prognosis of these cases. We all know that a case with a long period of incubation gives from the beginning a much better prospect, and that cases recover that, from the clinical symptoms, appear hopeless. The statistics—if there is anything in these so-called statistics—have not perceptibly improved for the last five or six years. In direct opposition to this disappointment, that we must freely admit, stands our scientific knowledge of the nature of the tetanus-antitoxin, of its property to chemically combine with the tetanus-toxin, and

thus to render it innocuous. I cannot enter here into the general theory of Ehrlich, that, up to date, is best adapted to give an explanation for observations made with the utmost exactness and reliability. Briefly, we know that the toxin has a specific affinity for certain nerve-cells, thus causing the intoxication. On the other side, we know that the antitoxin has a similar specific affinity for the toxic substance, and Ehrlich tells us that the antitoxin is simply a hyperproduction of those groups of the nerve-cell protoplasm that combine with the toxin. If in a test-tube we mix corresponding amounts of toxin and antitoxin, the mixture proves absolutely harmless for the animal injected with it. If we inject the corresponding amounts of both toxin and antitoxin separately into a rabbit at the same time, it will not become sick. Antitoxin injected eight minutes after the toxin, will allow the animal to become slightly sick; one hour later, twenty-four times the amount of antitoxin is necessary; twenty-four hours later, thirty-six hundred times this amount will not save the animal. Better are the chances in guinea-pigs and mice, where even after five to fifty-three hours most of the animals can be protected. In these two species of animals at the time when the typical tetanus symptoms have made their appearance, a great deal of the injected toxin can still be discovered in the body fluids. This is certainly different in rabbits, where, with the first slightest symptoms of the disease, no trace of the poison can be demonstrated.

This fact, and similar ones, show that in different species the interval between the dose producing pathologic effects and between the fatal dose varies greatly, or, as this can be expressed also, that the rapidity of absorption of the toxin varies greatly. Since absorption only and alone means the binding of the toxin to the susceptible cells, in this case to the nerve-cells, it follows that the fatal intoxication occurs in the one species earlier than in the other.

Since we can demonstrate that after toxin and antitoxin have chemically combined there are no physiologically possible means to sever this combination, and that especially a surplus of antitoxin will never achieve this, it is clear that an intoxicated nerve-cell cannot be ridded of the obnoxious substance. Antitoxin will not cure—it can only prevent the intoxication. The recovery or the death of a tetanized animal depends altogether upon the extent of the lesions already produced: if fatal injury has been done, the animal will die; if injuries of a slighter severity, it may recover. The antitoxin subsequently injected will only prevent further progress of the poisoning.

These points must well be considered, if we want to apply antitoxin treatment to human tetanus. It is a well-known fact that in tetanus in man it is a very rare exception that toxin can be found free in the body fluids at the moment when the first symptoms appear. The fatal dose for man is very nearly equal to the dose which makes him simply sick; the same as in the rabbit, the horse, the goat, etc. Antitoxin, after the symptoms have appeared, will, therefore, only be able to eliminate all of the remaining not combined toxin, and otherwise throw the patient on his own resources.

Behring prescribes that for the valuation of the antitoxin treatment only such cases ought to be considered in which the serum was administered not later than thirty hours after the first slight symptoms, and where a certain amount of antitoxin had been used. But even with this restriction the results obtained are not becoming satisfactory. The last *Deutsche Medic. Woch.* again brings an article in which four such cases, surgical ones, that fulfilled all the conditions

of Behring more than fully, ended fatally. A number of other similar ones have been reported.

Owing to the great rapidity, therefore, with which in man the tetanus-toxin is firmly fixed to the nervous system, we must not expect great effects from antitoxin administration; all of the methods intended to bring the antitoxin in more rapid contact with the forms of intoxication (intracerebral, subdural, etc.), have no scientific basis. Nevertheless, for the reasons mentioned, antitoxin ought to be used in every case of tetanus; and the general opinion about its efficacy will be changed when it will have become customary to use it prophylactically wherever suspicious injuries are dealt with.

That in our epidemics the number of fatal cases has not been greater is certainly partly due to the antitoxin. The distribution of the toxic serum lasted for two weeks, and nearly sixty bottles had been dispensed. Antitetanus serum was injected in a great number of cases even before the symptoms appeared (in one case where fortunately the first muscular stiffness was witnessed, recovery followed), and none of them developed tetanus. None of the cases that showed an advanced stage of the symptoms recovered.

II. We had to deal not with an infection, but with an intoxication by the tetanus poison. The serum was not contaminated with spores, but was the serum of a horse which was at the end of the incubation period of tetanus. If drawn three days later, it might have proved comparatively harmless, because, in the horse, the absorption is very rapid and complete, so that a horse with developed tetanus carries very little toxin in his blood. Owing to this fact, each bottle of serum contained a limited amount of toxin, equal in all of them. Exact experiments showed that 0.1 c.c. of the serum was the fatal dose for 300 grammes of guinea-pig weight. Comparing the average weight of the children that succumbed to tetanus after injection of this serum with the fact that a greater weight in other patients prevented a lethal issue, we arrived at the conclusion that in 10 c.c. was contained the approximate fatal dose for a human being fifty pounds of weight. This of course elicited the very important and valuable information that the susceptibility for tetanus-toxin in man is nearly equal to that of the guinea-pig, and about half that of the horse. If there had been spores or bacilli in the serum, not such a large percentage of the patients, and especially not, as a rule, the older ones, would have survived. The amount of toxin in such a case would have been illimitable.

That many of the patients died with a great amount of free antitoxin circulating in their blood, we could demonstrate in one case particularly. Here, forty-eight hours before death and one day after a tetanus-antitoxin injection, a lumbar puncture was made and some cerebro-spinal fluid withdrawn. With a certain amount of this fluid we were able to protect animals against the fatal dose of toxin. Nothing could more clearly show the correctness of the above made remarks.

For no infectious disease has there been as yet a chance to approximately determine the relative toxic susceptibility of man and those animals for which numberless experiments had established the fatal dosage of bacterial toxin.

III. In at least fifteen cases the development of tetanus was prevented by the administration of the serum by the mouth. These were all cases in which it was intended to immunize the members of the family surrounding the diphtheritic individual. In no case was any bad effect noticed. Although this fact has, as you see, a great bearing on the extent to which the accident went, it does not bring

out anything new. We have known all along that tetanus-toxin is not absorbed by the gastro-intestinal mucous membrane, and it is a fact that active tetanus bacilli are not so rarely inhabitants of human and animal intestines. Why this is so we do not yet know. The results of experiments made in this direction some years ago by Nencki and Ranson contradict each other directly, the one asserting that the toxins are destroyed by the intestinal secretion, the other that they are eliminated intact with the feces. It is, however, established that newborn or very young animals and infants can be intoxicated in this way, and as explanatory of this, a histologic observation is offered. In the newborn (animal and man) and for a short time after birth, the secretion of mucus by the gastric mucous membrane is not present. The epithelial cells of the newborn appear uniformly protoplasmatic, are free from granules and sharply defined towards the free surface. Only later in some places by muci-carmin stain small masses of mucus can be demonstrated, which lie close to the surface, and are distinctly limited towards the protoplasm of the cells. This formation of mucus appears in certain foci, and is in the beginning restricted to the most superficial layer of the protoplasm of the cells. It is possible that the absence or the slight extent of mucin-formation is favorable to the absorption of the toxin.

What has been said about the absorption of toxins by the gastric mucous membrane, obtains as well for the antitoxin. Unless pathologic placental disturbances (hemorrhages, etc.) occur, no antitoxin is transmitted from the mother to her baby before birth. But this transmission takes place by the nursing process, supposing that the mother carries antitoxin of some kind in her circulation. The amount of antitoxin present in the milk is about five per cent. of that contained in the blood. With the advancing age of the infant the antitoxin found in his blood decreases more and more, and disappears finally altogether, notwithstanding the fact that the mother all the time transmits with her milk the same amount of antitoxin as before. This can only be explained by some chemical or physical change in the absorbing cells. Experiments made in this line in earlier years, which gave positive results, have perhaps neglected the small abrasions and injuries especially liable to occur in animal experiments by the stomach tube, since we know that from such denuded areas toxins as well as antitoxins are easily absorbed. This would obtain, too, for experiments in adult human beings, where catarrhal, insignificant epithelial conditions exist in the gastro-intestinal tract.

Although in our case this form of antitoxin administration was a very fortunate *quid pro quo*, it is not to be recommended as a generally indicated method.

AN HISTORICAL RESUME OF THE PROCEDURES INTENDED FOR THE REPAIR OF CLEFT-PALATE, WITH MENTION OF A CASE.*

BY WILLARD BARTLETT, A. M., M. D., of St. Louis, Missouri.

(WITH TWO ILLUSTRATIONS.)

It has been almost a century and a half since the first operation designed to remedy a congenital defect in the roof of the mouth. In 1767 Lemonnier repaired a cleft in the soft palate, and thus gained the distinction of being the first to attempt anything of the kind. From that time up to 1816, the date of v. Graefe's first operation, the feasibility of such a procedure appears to have remained unrecognized. Indeed, most writers agree that practical staphylorrhaphy and uranoplasty owe their origin to three men—v. Graefe (*Die Gaumennaht, ein neuentdecktes Mittel gegen angeborene Fehler der Sprache*, *Journal der Chirurgie und Augenheilkunde*, Berlin, 1820), the German, Roux (*Memoire sur la staphylorrhaphie ou la suture du voile du palais*, *Arch. gen. de med.*, Paris, 1825), the Frenchman and Warren (*On an operation for the cure of natural fissure of the soft palate*, *Amer. Jour. of the Med. Sciences*, 1828) of our own country.

Wardrop and Alcock¹ were among the early operators in England, having reported an unsuccessful case in 1827; but of the pioneers in this field Roux² had by far the widest experience. As early as 1828 he was able to report no less than forty cases, of which twenty-two had proven successful, while in 1854 the same author³ could boast of having made one hundred and forty such operations.

The earlier surgeons had confined themselves to various methods of median suture till Dieffenbach⁴ enriched the technique by his incisions along the alveolæ for the relief of tension.

Fergusson⁵ must be credited with the next step toward making this a trustworthy surgical procedure when he proposed destroying the motor apparatus of the soft palate, that rest might favor the reparative process. This surgeon's⁶ idea was not based on purely theoretical deductions. On the other hand, he demonstrated by dissections that the levatores and the palato-pharyngei, when irritated to action, tend to draw the edges of a cleft asunder, thus diminishing the likelihood of surgical cure. Of Fergusson's⁷ first one hundred and thirty-four cases thus treated, one hundred and twenty-nine resulted in perfect union being obtained. Our own Warren⁸ had in mind a similar idea when he suggested section of the posterior pillars of the pharynx with scissors; and Billroth,⁹ many years later, aimed at the same result when he conceived the idea of breaking off the hamular process—the fulcrum of the tensor palate—with a chisel.

Syme¹⁰ was probably the first, in 1854, to object to all procedures intended to paralyze the palate, on account of their permanent ill-effects; and the opinion gained ground until 1900, when Lexer¹¹ wrote of this step in the operation as possessing historical interest only.

The next advance after that of Fergusson was made by Dieffenbach¹² when he instituted the practice of chiseling off from their lateral attachments the two

* Presented at a meeting of the Society of Dental Science of St. Louis, November 12, 1901.

segments of the cleft bony arch and uniting the same by median silver sutures; a procedure the value of which was attested by Fergusson¹³ as late as 1874, when he wrote that certain cases can be successfully treated in no other way. Still, the method has never been generally accepted, was given unfavorable notice by Mason,¹⁴ as well as by Heath,¹⁵ and is now little used.

No *résumé* of the work done on cleft-palate during the first half of the last century is complete without mention at least of Mütter,¹⁶ of Philadelphia, who had experience with a large number of cases, and who with Liston gave a most exhaustive and detailed description of the operative technique as far as developed up to the appearance of their work on surgery in 1846.

We now smile at many of the suggestions made during this period, which antedated anæsthesia, antisepsis and exact hæmostasis. Cusack¹⁷ had very properly proposed in 1843 that no sutures be introduced till all hemorrhage caused by cutting the flaps had ceased, but Smith¹⁸ went rather to extremes when a few years later he announced that he considered it best to fashion the flaps, then to perform some other operation and introduce the sutures at his leisure after the first sufferer had been allowed ample time to stop all bleeding by rinsing his mouth with water. Imagine one of us affording a patient such an experience in this day and age!

In 1861 v. Langenbeck¹⁹ emphasized the importance, in repairing a fissure of the hard palate, of making flaps consisting of the entire thickness of mucous membrane and periosteum; though J. Mason Warren²⁰ had done practically the same thing twenty years earlier in cutting his soft flaps; a matter which becomes obvious when one considers that it is easier to separate the periosteum from the bone than it is to divide the periosteum and the mucous membrane. It must be admitted, however, that v. Langenbeck's²¹ method of elevating the flaps had a decided advantage over that of Warren, in as much as the German surgeon commenced at the alveolus and worked toward the median line, while our countryman proceeded in the opposite direction. At any rate, the former systematized most carefully the technical suggestions of others who had preceded him, and is given the credit by most German writers at least for a procedure whose five steps will be recognized in what has gone before. The so-called v. Langenbeck operation, as quoted by Lexer,²² consists of (1) paring of median edges; (2) section of muscles; (3) making of lateral incisions; (4) elevation of flaps; (5) introduction of sutures; a method which, modified or as here presented, has been used far more frequently than has any other. As a practical illustration of what may be accomplished by it, I have brought you a patient, Mrs. S., aged thirty-nine, who presented herself for operation on the 2d of April, 1901. She had a median cleft which began just behind the intact alveolus and extended through almost the entire hard palate. According to her account, the fissure did not exist prior to her second year, to which must be added the opinions of three prominent gentlemen, a laryngologist, a dermatologist and a dentist, that the seam in the roof of the mouth was due to inherited lues. However, the two casts kindly made for me by Dr. Lukins show no trace of the patient ever having had a right lateral incisor; this, as well as a study of her profile, forces me to the belief that the entire affliction is of congenital origin.

I performed what has been termed the Langenbeck operation, inserting six or eight silver wire sutures, which were left in for a few days. There were no post-operative complications, every stitch held, and the fissure healed from end

to end by primary intention. In seven months the lady's voice has improved markedly, though you still notice a certain vocal defect, which is always present in those who have learned to talk before the operation is performed.

Davies-Colley²³ introduced a most striking perversion of the original v. Langenbeck idea, when he succeeded in bridging the cleft so to speak by a flap which was reflected diagonally across from one side to the other; a method which could have accomplished but little in one of those cases with a high, steep arch, which Pollack²⁴ mentioned as responding so kindly to treatment by the five steps just detailed.

The dangers and difficulties of the operation were minimized at one stroke by Röse²⁵ when he taught us to perform it with the patient's head hanging off the table; and while some surgeons have never become convinced of the utility of this method, still it seems that far the greater number of those who have given it a trial are now numbered among its admirers

On account of the well-known difficulty in introducing and tying the sutures



used in such operations, many ingenious instruments have been devised by Gibson,²⁶ Heath,²⁷ Price,²⁸ Rawson²⁹ and others to facilitate this part of the work; and while the subject of the instrumental aides is under discussion, it must be noted that Süßmuth³⁰ improved, by use of a prosthesis, the articulation in thirteen cases, in which the operation had resulted favorably as far as wound healing was concerned. Furthermore, application of irritants like cantharides (Diefenbach) or nitric acid (Mason³¹) have been exceedingly useful in exciting granulations to fill a cleft which had been small originally, or partly closed by an operation.

Even partial closure has long been estimated of value in these cases—in fact, Warren³² brought the movable halves of the soft palate together in cases where the cleft in the bony structures was too great to admit of repair, as he said; though Field³³ wrote later that he could imagine no defect too great to be overcome by persistent efforts; still others have encountered cases in which the difficulties at hand made it seem more feasible to close the osseous arch at one sitting, and the soft one at another, as Collis³⁴ long ago advised.

To Brophy³⁵ belongs the credit for the most ingenious and logical method which we possess for correcting this malformation, during infancy. Departing from all the traditional procedures, he went deeper than any of his predecessors, and sought by *directing nature's efforts* in the proper channel to prevent the persistence of a defect; every other surgeon had regarded the divergence of the bony parts as inevitable and, as I have shown above, contented himself with merely bridging the same. Brophy's procedure is well known to most of you. It consists, in short, of wiring together over lead plates, outside the alveolus, the *superior maxillary* bones which show no tendency to unite in the median line by their palatal processes.

Thus it will be seen from the above that a large number of operators have attempted in different ways to remedy the defect by autoplasty. On the other hand, many cases have been successfully treated by transplanting into the cleft portions of tissues other than those which helped to form the imperfect vault. So varied and ingenious have these procedures been that one can but admire the daring of their authors. Gersuny³⁶ took a flap from the tongue, and Schoenborn³⁷ one from the posterior wall of the pharynx, while Passavant³⁸ sewed the uvula to the pharyngeal wall to help shut off the cavities of the nose from the mouth. A flap from the cheek was used by Delarme,³⁹ one from the lip by Rose,⁴⁰ and one from vomer by Lannelongue.⁴¹ Even more striking seems the procedure of Kraske,⁴² who succeeded in relieving a patient by sewing the two inferior turbinated bones into the gap. Blasius,⁴³ Rotter⁴⁴ and Bardenheuer⁴⁵ went even further from the seat of trouble and took from the forehead, flaps with which they managed to accomplish the desired end.

Most sensational of all the heteroplastic operations, however, were the two performed by v. Eiselsberg:⁴⁶ in the first he bridged the chasm with a flap removed from the patient's forearm, while in the second he obtained a most admirable result by sewing into the cleft his patient's little finger, the same being amputated twenty days later.

As cleft-palate and harelip are so commonly associated, there arises frequently the question as to which shall be repaired first, and by far the greater number of authors have agreed that the lip should be sutured during infancy and the more severe operation undertaken at a later period. Branth⁴⁷ as well as Brophy,⁴⁸ however, have lately taken the decidedly logical view of the matter and advanced the idea that the lip should be attended to last, as by so doing the operator leaves himself decidedly more room through which to accomplish the more difficult work within the mouth.

Kingsley⁴⁹ has said that adults outgrow all the troubles in deglutition to which infants thus affected are subject. Hence there remains as our chief consideration in undertaking the repair of cleft-palate, the improvement of the voice, and the age at which the operation is to be undertaken must be that which favors the end in view.

There can be no question that the results in this direction have been better the younger the person operated upon. Still, so many arguments have been advanced for and against early operation, that the ideas of numerous authors must be considered before one can arrive at a definite conclusion on this point.

Beely⁵⁰ says that most of the operations on young children prior to the year 1880 were unsuccessful, and Fergusson⁵¹ advised waiting till the adult age, because the hard palate then takes less part in the deformity. The chances of

success are said by Marsh⁵² to increase as the age of the child advances, a circumstance which Warren⁵³ and Liston⁵⁴ also emphasized long ago when they advised that no operation be done before the patient has reached the age of discretion and is willing to submit to pain as well as voluntarily aid the surgeon in his work. A number of other surgeons have specified precisely in figures what they considered the age of election. This is with Roux⁵⁵ sixteen years; Gross,⁵⁶ fifteen years; Trelat,⁵⁷ seven years; Delbet,⁵⁸ six to seven years; Mason,⁵⁹ five to six years; Koenig,⁶⁰ four to six years; Annandale,⁶¹ two years; Wolff,⁶² ten months; Brophy⁶³ and Karewski,⁶⁶ under three months. The attempt should be made in general, say Smith⁶⁵ and Karewski,⁶⁶ as early as the child's state of nutrition will allow it to be risked, while Malgaigne⁶⁷ gave a practical exposition of his views on this phase of the subject when he did a successful operation nine hours after the birth of his patient.

This backward glance over the history of palate surgery forces the writer to the conclusion that the Brophy operation is for its purpose the best procedure at our command, in as much as it is the only one which gives to the bony arch its proper breadth, the only one which can by reason of the slight hemorrhage caused and the little time required, be performed upon a poorly nourished child at a period when perfect vocalization must be secured or the golden opportunity forever lost.

3894 Washington Boulevard.

BIBLIOGRAPHY.

1. Lancet, June 16, 1827.
2. Monthly Journal of Foreign Medicine, vol. ii., 1828.
3. Quarante annees de pratique Chirurgicale, 1854.
4. Die operative Chirurgie, Leipzig, 1845.
5. Medico-Chirurgical Transactions, vol. xxviii., p. 273.
6. Medical Times, March 6, 1847.
7. Lancet, June 25, 1864.
8. American Journal of Medical Sciences, vol. xv.
9. Wiener klin. Wochenschrift, 1889, No. 12. (Abs.)
10. Monthly Journal, April, 1854.
11. Handbuch der praktischen Chirurgie von v. Bergmann, v. Bruns u. v. Mikulicz.
12. Die operative Chirurgie, Leipzig, 1845.
13. British Medical Journal, 1847.
14. The Surgery of the Face, 1878.
15. British Medical Journal, November 4, 1882.
16. Lectures on the Operations of Surgery, 1846.
17. Dublin Journal of Medical Science, January, 1843.
18. Medical Times, January 19, 1850.
19. Archiv. fuer klin. Chirurgie, Bd. ii., s. 205.
20. American Journal of Medical Sciences, vol. xvi.
21. Archiv. fuer klin. Chirurgie, Bd. v., s. 43. (Abs.)
22. Handbuch der praec. Chirurgie, von v. Bergmann, v. Bruns u. v. Mikulicz, 1890.
23. British Medical Journal, October 25, 1890.
24. Medical Times and Gazette, February 8, 1862.
25. Archiv. fuer klin. Chirurgie, Bd. xvii., s. 462. (Abs.)
26. Institutes and Practice of Surgery, 1845.
27. Lancet, December 18, 1858.
28. Medical Times and Gazette, June 9, 1860.
29. Medical Press and Circular, February 2, 1876.
30. Inaug. Diss., Greifswald, 1897. (Abs.)
31. Lancet, July 29, 1876.
32. American Journal of the Medical Sciences, vol. xxvi.
33. Medical Times and Gazette, January 18, 1862.
34. Dublin Quarterly Review, May, 1856.
35. Dental Cosmos, April, 1901.
36. See v. Eieselberg, Archiv. fuer klin. Chir., Bd. 64, Hft. 3.
37. Archiv. fuer klin. Chirurgie, 1876, Bd. 19. (Abs.)
38. Archiv. fuer klin. Chirurgie, Bd. vi. (Abs.)
39. Bulletins et memoires de la Societe de Chirurgie, 1897. (Abs.)
40. Archiv. fuer klin. Chirurgie, Bd. xxiv. (Abs.)
41. See La Dentu in "Traite de Chirurgie," 1897. (Abs.)
42. Beitrage zur klin. Chirurgie, Bd. xiv. (Abs.)
43. See v. Eieselberg, Archiv. fuer klin. Chirurgie, Bd. 64, Hft. 3.
44. Bericht der Verhandlung des 18 Congresses der deutschen Gesellschaft fuer Chirurgie. (Abs.)
45. Bericht der Verhandlung des 21 Congresses der deutschen Gesellschaft fuer Chirurgie. (Abs.)
46. Archiv. fuer klin. Chirurgie, Bd. 64, Hft. 3.
47. New York Medical Journal, August 10, 1901.
48. Dental Cosmos, April, 1901.
49. Lancet, December 7, 1864.
50. Gerhardt's Handbuch der Kinderkrankheiten, Bd. vi., Abth. 2.

51. Medical Gazette, December 20, 1844.
52. Lancet, July 7, 1888.
53. American Journal of the Medical Sciences, vol. xlv.
54. Liston's Practical Surgery, 1842.
55. Quarante anne'es de pratique chirurgicale, 1854.
56. A System of Surgery (Gross), 1864.
57. Revue de Chirurgie, 1885. (Abs.)
58. Lecons de Clinique chirurgicale, 1899.
59. St. Thomas Hospital Reports, vol. vii., p. 61.
60. Koenig's Lehrbuch der speciellen Chirurgie, 1898.
61. British Medical Journal, December 2, 1893.
62. Archiv. fuer klin. Chirurgie, Bd. 33 u. 34.
63. Dental Cosmos, April, 1901.
64. British Medical Journal, March 28, 1874.
65. Medico-Chirurgical Transactions, vol. li., 1868.
66. Die chirurgische Krankheiten des Kindesalter (Karewski), 1894.
67. Dublin Quarterly Journal of Medical Sciences, vol. i., 1846.

A CASE OF NEPHROTOMY, WITH DRAINAGE FOR TUBERCULOSIS OF THE RIGHT URETER—SECONDARY NEPHRECTOMY— APPARENT CURE.

BY H. MCC. JOHNSON, M. D., of St. Louis, Missouri.

Dr. M., after having graduated in medicine and resided in a hospital as interne for two years, in good health began to practice in a large city. Shortly afterwards, while riding a bicycle, he had a sudden sharp pain in the right inguinal region, which compelled him to dismount. This gradually faded away after a half hour. When he next urinated he noticed that his water was bloody. After this these attacks of pain, followed by bloody urine, became more and more frequent and intense, and usually occurred while in bed in the early morning. They were relieved by morphine, and lasted usually about an hour. They were accompanied by vomiting, but no fever. The pain extended to the lumbar region on several occasions, and quite frequently involved the perineum. There was no retraction of the testicle and no reflection of the pain down the leg. Frequency of urination was absent.

Examination of the first urine passed just after the attack subsided showed much albumen, much blood, and hyaline, epithelial and granular casts. In the interim the patient felt comparatively well, with occasionally an intimation of pain in the perineum; and the urine cleared up so that only rarely could a blood-cell be found, and no casts were discernible. No tubercle bacilli could be found in the urine. At the point where the ureter passed into the true pelvis there was tenderness on pressure, and some thickening of the deep tissues.

On the 16th day of January, 1900, under chloroform, a cross-lumbar incision was made and the kidney removed from its bed and brought out through the wound. The organ presented a healthy appearance in its external aspect, size and shape, with the possible exception of excessive curve on its long axis. Along the inferior convex border I cut through the cortex into the pelvis sufficiently to admit the index finger. There was no foreign substance in the pelvis, but it was very much enlarged from dilatation, with thin walls. An incision was now made through the pelvic wall into the pelvis, and the ureter freed for several inches. This shared in the dilatation of the pelvis. A catheter could be readily passed into the ureter for about six inches, down to the brim of the pelvis, but no further. Tuberculosis of the ureter was regarded as the obstructing agent, and it was decided to drain rather than do a primary nephrectomy. A rubber tube was passed through the pelvis down the ureter to the obstruction, the kid-

ney replaced, and the wound dressed open. The patient made a good recovery, the wound being drained for three weeks, when it was allowed to close, and healed kindly. One week after cicatrization had taken place the patient had a chill, followed by fever which lasted, with a gradual decline, one week. Pus appeared in the urine in small quantity. The urine was now carefully gone over by Dr. Fisch for tubercle bacilli, and, finding a few acid-alcohol-resisting bacilli in the sediment, he injected two guinea-pigs, with the result that both of them developed tuberculosis.

With these facts before him, the patient now sought health in the mountains of the West, where he remained till May 18, 1900. He did not improve, but, instead, the urethral obstructive symptoms continued, and rather increased in severity, each paroxysm being accompanied by high fever. In addition to the fever and pain, a distinct enlargement of the kidney pelvis from distension during the attacks became plainly evident on palpation. As climate and drainage made no impression on the disease, we determined to give up the fight and sacrifice the kidney. Accordingly he returned to St. Louis, and a few days later I did a nephrectomy. In the kidney, adjacent to the pelvis, was a small abscess cavity about one-fourth inch in diameter. Two small necrotic areas the size of a pea were noticed in the cortex. The pelvis was still much dilated. I removed the kidney, leaving the ureter, believing the ureteric lesion, after being relieved of the contact of urine and function, would subside and the ureter would become fibrous. The patient made a rapid and good recovery, the wound closing entirely within six weeks. He now began to gain in strength, and had no more fever and no pain. In the fall he went to Colorado, in the neighborhood of Denver. He rapidly took on weight, and soon had gained fifty pounds; has had no more of his original trouble, and now, one and a half years since the nephrectomy, is in fine health, subjectively and objectively, and has resumed the practice of medicine.

The diagnosis of tuberculosis of the ureter is based on the following: The cystoscope showed the bladder to be free from disease; the absence of bladder symptoms; the demonstration of tubercle bacilli in the urine; the symptoms of ureteral obstruction during the paroxysms; the fact that the urine passed just after the attacks subsided showed evidences of backward renal pressure in the shape of casts; the site of the pain, tenderness and thickening as felt through the abdominal wall; the impediment at the point of thickening to the catheter passed down the ureter; the dilatation of the renal pelvis.

The small abscess cavity in the kidney at the time of the nephrectomy was probably due to the extension of the disease upwards, as drainage seemed not only to not help the condition, but rather to aggravate it.

INTERSTATE MEDICAL JOURNAL

EDITED BY

WILLARD BARTLETT, M. D.

WALTER BAUMGARTEN, M. D.

HUGO EHRENFEST, M. D.

MARTIN F. ENGMAN, M. D.

R. B. H. GRADWOHL, M. D.

JOHN GREEN, JR., M. D.

H. McC. JOHNSON, M. D.

JESSE S. MYER, M. D.

WARREN B. OUTTEN, M. D.

WILLIAM PORTER, M. D.

WILLIAM E. SAUER, M. D.

SIDNEY I. SCHWAB, M. D.

JOHN ZAHORSKY, M. D.

OTHO F. BALL, M. D. Managing Editor.

COLLABORATORS:

MAX MICHAELIS, M. D.,

Docent of Internal Medicine, University of Berlin, Germany.

FRANZ NEUGEBAUER, M. D.,

Professor; Director of the Evangelical Hospital, Warsaw, Russia.

JULIUS NEUMANN, M. D.,

Docent of Obstetrics and Gynecology, University of Vienna, Austria.

JULIUS SCHNITZLER, M. D.,

Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

HEINZ WOHLGEMUTH, M. D.,

Berlin, Germany.

Address all communications to the INTERSTATE MEDICAL JOURNAL, COMMERCIAL BUILDING ST. LOUIS, MO.

EDITORIAL COMMENT.

CONSUMPTION LEGISLATION.

No one doubts that consumption is a communicable disease, and that efforts should be made to eradicate it. There is much doubt, however, as to the manner and period at which it is most communicable. It is agreed that the danger of communication is the greatest when there is mixed infection, and this occurs when the disease is in its advanced state. The disease cannot be classed with communicable diseases, such as scarlet fever, small-pox, etc., and the same ordinance governing them would not be applicable in one which is chronic and may last for several years or longer. It is not advisable, many times, to inform the person of his or her infection, as it might hasten the end and lessen the chances of improvement or cure; and as the disease is chronic, and many families are dependent for years upon the earning capacities of its afflicted members—for there are many bread-winners among consumptives—it would be unjust and impolitic to brand such members of the community as infected persons, to be shunned and dreaded and deprived of an earning capacity. No family is proof against the disease, for it is acknowledged that it may and does occur in some form in one out of every three.

If legislation against consumption is indispensable, equally necessary is it, if not more so, against certain other diseases in our midst whose victims, often innocent, are saddled with intolerable burdens. If this city has money to spend for disinfection, as the bill calls for, which must of necessity and from the nature of the disease be inadequate, inoperative, insufficient and imperfect, and

after the lapse of a few days worthless, instead of squandering it for disinfection which does not disinfect, it could be more advantageously expended in the establishment of sanitariums or hospitals for consumptives; resting places, where the afflicted would receive proper care and attention, coupled with the more beneficent and curative influences of good food, fresh air and plenty of sunshine, which in themselves are more potent remedial agents than medicines or artificial disinfectants, and will accomplish more in the prevention, restriction or cure of consumption than any known means. Without a suitable hospital for pressing needs, and with no appreciable beneficial results gained from existing legislation in cities where similar ordinances have been in force, it would be folly to pass such a consumptive bill as the one recently presented to the City Council.

It would appear that the future will be more promising if our efforts are directed along educational lines. Special instruction regarding hygiene must be given at home and at school, especially that relating to the care of the body, the proper disposal of the sputa and dejecta, etc., and the individual impressed with the obligations and duties to the community and to one's self.

Instead of so much disinfection, cleanliness would be more sensible; soap and water would be more effectual than the disinfection contemplated.

Furthermore, disinfection of any kind could not be performed without great expense, especially as contemplated in the bill, as the occupant or occupants must be removed and premises not habitable for a day at least, the irritation caused by the drugs being very injurious and causing much discomfort. Some provision would have to be made for the disposal of the occupants of the premises disinfected, and upon return to own home the necessity would arise of disinfecting the temporary quarters vacated.

As the case stands, it does not appear that this community is prepared to make crude experiments with no experience of the past to offer likelihood of a practical return commensurate with the expense necessarily entailed. When hospital and sanitary necessities materialize it will be time enough to call upon officialism to compel the afflicted to benefit by paternalism.

In conclusion, a protest will not be amiss against the unfavorable criticisms of the physician who is represented as objecting to this crude, incomplete and inadequate bill from mercenary motives, a libel upon a profession always charitable and public-spirited, but much abused. On the contrary, the members of the medical profession are ever ready to support and labor for rational and feasible sanitary legislation, and the almost unlimited power provided for in the consumptive bill could very easily be made oppressive and galling, and productive of much injury to the afflicted. Especially so when it is recalled how autocratic, inconsiderate and illegal the acts of some officials and their representatives sometimes are.

The bill amended by the committee of the St. Louis Medical Society is far from perfect. Of necessity any bill that could be framed will be woefully deficient, but as the impression has gone forth that some kind of bill must be acted upon at the present session of the Council, one that contains the fewest objections should be presented.

THE CAUSE OF THE HÆMOSTATIC ACTION OF GELATIN.

Since its introduction to the notice of clinicians by Carnot in 1896 the subcutaneous injection of gelatin as a means of increasing the coagulability of the blood in hemorrhages from internal organs has received wide attention. The French clinicians rapidly took hold of it, employing the treatment particularly in the hope of producing clots within aneurysmal sacs. The Germans (Senator, Leyden, Klemperer) regarded the procedure with much skepticism, and considered the favorable results in aneurism due chiefly to the rigid rest in bed which was enforced in the after-treatment. In the past year or two more favorable results have been reported from the German clinics, especially from the medical clinics, in hæmorrhages from the lungs, from gastric ulcers, typhoid ulcers in the intestines, and from the bladder and kidneys. The results in aneurism have been variable and depend greatly on the form of the dilatation.

Many views have been entertained as to the mode of action of gelatin, and so far its use has been purely empirical. Probably the most widely accepted opinion is that of Lancereaux, who supposes that the gelatin solution is taken up by the lymphatics from the subcutaneous tissues into which it is injected, from which it reaches the blood; that no reaction takes place except at the bleeding point, and that here the clot begins to form on the injured intima of the bleeding vessel. He expresses no opinion as to what the nature of this reaction may be, but gives the impression that the gelatin acts as such.

The question of this reaction has been studied by Zibell, of Greifswald (*Munch. Med. Wochenschr.*, October 15, 1901), who has recently conducted accurate analyses of four grades of gelatin obtainable on the market. He finds that the better grades of gelatin yield 1.5 per cent. ash, of which 41.6 per cent. is calcium oxide, giving a calcium content for the gelatin of 0.6 per cent. Comparing this with magnesium, iron and phosphoric acid contents, which were respectively 0.05, 0.01 and 0.06 per cent., it may be seen that the calcium forms by far the greater proportion of the solid constituents. The usual quantity of gelatin solution injected (200 c.c. of a two per cent. solution) would therefore contain 0.024 gram of calcium.

The necessity of the presence of calcium in the blood in order that coagulation may occur, and the increased coagulation following the addition of an excess of calcium to the blood, is well known, and has led to the administration per mouth of inorganic salts of calcium in hæmorrhages of many sorts. Zibell suggests that gelatin forms a means for the prompt absorption and easy diffusion of calcium into the circulation, and that this is the basis of its action.

X-RAYS IN DERMATO-THERAPY.

When Prof. Roentgen discovered his X-ray in 1895 it was little thought that we had in it a great therapeutic as well as diagnostic agent until Schiff began his experiments in 1897. Since then numerous workers have demonstrated the value of this treatment in various diseases of the skin, especially those of an epitheliomatous and chronic granulomatous character, as epithelioma and lupus. The inflamed, gangrenous and necrotic conditions produced by the use of the rays in their early history were accidents in the hands of incautious and inexperienced workers, for it is now known how to prevent them and to stop treatment by the early recognition of irritation.

Flattering reports from so many workers in this field forces upon us the conviction that a new era in the treatment of certain rebellious diseases of the skin is now opening, and that a new agent has come which will occupy a high place in dermato-therapy, probably even higher and of greater value than the much-vaunted and tedious "Finsen Light Treatment."

No one can read the masterly work of Dr. Francis H. Williams—"The Roentgen Rays in Medicine and Surgery"—and not be convinced of the inestimable worth of this agent and realize the immense boon given to us as physicians by the work of Roentgen. The book of Dr. Williams is an exhaustive study or rather practical treatise upon all phases of X-ray work, dealing quite extensively with the dermatologic part of the subject, which includes not only the literature to date, but the report of quite a number of cases thus treated from his own practice. The rays have proved in Dr. Williams' hands, as in those of other workers, especially efficacious in lupus and epithelioma.

It has been the criticism of many that we have recurrences after this treatment! But is this not so of all other known methods? Can we insure a patient that his epithelioma will not recur after removing it and a wide margin of his integument with the knife? Can we tell him it will not recur after having him spend hours of pain under the arsenical pastes? Can we promise a lupus patient freedom from his disease after months of pastes, caustics, plasters, salves or lotions? These diseases will often recur after any method, and if they do after the X-rays, there is no form of treatment as painless, simple and easy by which to treat the recurrence. It is particularly applicable to these cases, as the ease of its application relieves the despondent, discouraged and timid patient of all fear of active or painful procedure. As the action of the rays are better understood they may prove of value in diseases of skin other than lupus and epithelioma, if not as the specific agent, as an assistance to other methods. Numerous experiments in this direction are encouraging. Of especial interest is the remarkable result lately obtained by Dr. Carl Beck, reported in the *N. Y. Medical Journal*, in a case of sarcoma of the leg.

THE OUTBREAK OF TETANUS IN CAMDEN, NEW JERSEY.

It seems perfectly conclusive at the present time that the outbreak of tetanus in Camden, New Jersey, in connection with the vaccination which has been carried on there, is entirely due to infection with the tetanus bacillus subsequent to the performance of vaccination. In other words, it has been definitely proven that the vaccine virus was pure and not contaminated with tetanus bacilli or tetanus toxin.

The official report of the Camden board of health shows that the vaccine virus was pure, animal experiments failing to show the presence either of the bacillus or the toxin of tetanus. Again, the cases of tetanus which occurred in vaccinated individuals arose too late after the performance of the vaccination to permit the supposition that the infection was given at the time of the performance of the vaccination; the signs of acute tetanus always occur in from five to nine days after the introduction of the bacilli, whereas in every case acute tetanus occurred here in from three to four weeks after vaccination.

The tetanus cases in Camden are to be explained upon atmospheric and telluric conditions which have prevailed in Camden in the past six weeks. There has been a period of dry weather with high winds, so that tetanus germs which

have their normal habitat in dirt, dust, refuse of stables, etc., have been constantly distributed in the atmosphere. In all the cases, it was noticeable that the scab had been knocked off or removed, or else the arm had been injured and infection followed. This accident should in no way deter physicians from advocating the efficacy of vaccination, nor should it make intelligent lay people suspicious of this highly valuable measure.

A NEW THOUGHT ON THE TREATMENT OF CARCINOMA.

Possibly the most bizarre method of treatment for carcinoma that has ever been offered the medical profession is that embodied in F. Loeffler's monograph in the *Deutsche Medicinische Wochenschrift*, No. 42, 1901. Loeffler's contribution goes over, in first order, some writings of the ancients in medicine, and he gives credence to them, just as if they had been written in the light of our present knowledge. Perhaps we are presumptuous in mentioning this point, when the fact is considered that one of the aforementioned ancients is no less a person than Hippocrates himself. Still we must not forget, in our blind homage of the Hippocratic idol, that "things were not as they seemed" in those days, and that much that was good and true and apparently logical in the days when the great Greek master ruled the medical world with his dicta is no longer entertained in aught but reminiscent moments—but not at all as true when we are serious. Loeffler's paper is entitled "A New Method of Treating Carcinoma." He mentions first that malaria has from time immemorial been said to have a remedial effect upon certain diseases, referring to Hippocrates in proof thereof, to-wit: Hippocrates' "Epidemiorum," L. vi., Sec. 6, Kap. v. Further, Trnka, professor of anatomy in the University of Tyrnava, Hungary, in 1775 published an observation of a case of carcinoma of the breast being completely healed by the individual passing through an intercurrent attack of malaria of a few weeks' duration. Loeffler further quotes the observations of Fehleisen and Busch concerning the remedial effects exercised by toxins of the streptococcus erysipelatosus upon cases of inoperable cancer. The treatment by injection of these toxins was considered dangerous, as individuals were liable to be attacked with fatal erysipelas.

Loeffler calls attention to the fact that in the middle European countries, where malaria is but seldom found, carcinoma is quite frequent and is continually increasing. This is an interesting fact, although we have no evidence as yet to show that these two conditions are interdependent. Yet in the tropics, where malaria is prevalent, carcinoma is uncommon. This inclines Loeffler to the belief that there is some relationship between these two diseases. He states that a colleague, Dr. Pagel, has lived for over ten years in North Borneo, and during that time he has never seen a case of carcinoma. Loeffler believes that there should be sufficient truth in these facts to warrant some experimental work on carcinomatous patients. He therefore requests those having malaria patients to inject their blood into carcinomatous patients with the hope of curing them.

The theory is plausible, and, of course, warrants some investigation. Whether there is anything of value in it remains to be gathered from future experimental work of the kind indicated. Certainly the present inadequate means at our command in the treatment of cancer would naturally encourage research for something better. Loeffler has called attention to something which may contain either a grain of truth or volumes of it. The problem could easily be solved in

this country, where malaria holds forth for quite a considerable part of the year, and where also we meet with carcinomatous patients in great numbers.

THE QUESTION OF MILK SUGAR OR CANE SUGAR.

In spite of the immense amount of experimentation that is done on the subject of infant-feeding, nothing is more obscure than the relative value of milk and cane sugar. It is known clinically that infants can digest cane sugar, but whether the use of milk sugar possesses any definite advantage is not known. On theoretical grounds American pediatricists have adopted almost a uniform rule to give milk sugar, unless some special abnormal contra-indication exists. But Jacobi has persistently opposed its use and preferred cane sugar. His objection to the use of lactose is that it is frequently impure and is much more readily decomposed by acid-producing bacteria. On the other hand, he finds no particular objection to cane sugar. It is cheaper, purer and just as readily digested.

Some writers assert that the animal sugar is much more readily absorbed and assimilated.

Carter and others have demonstrated that lactose and the sugar from human milk are not identical; in fact, it has been shown that human milk contains two carbohydrates—a crystalline aldobiase and an amorphous substance (animal gum).

It is therefore questionable if we really imitate human milk sugar by giving lactose.

Still, cane sugar given in excessive amounts, as in condensed milk, is almost invariably followed by rickets. The induction of nutritive disturbances on such a diet is well known, so that it cannot be said that cane sugar possesses no objectionable features.

The adaptation of the infantile organism is often remarkable. Exact observations of the relative value of these sugars are wanting. It seems therefore unwise to make dogmatic statements on the subject. The clinician will rather have the privilege to use either form, according to the individual conditions present in each case.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

The Diagnosis and Therapy of Esophagus Diverticula.—MAYR and DEHLER, Wuerzburg (*Muenchener Medicinische Wochenschrift*, September 10, 1901).—Since the introduction of the œsophagoscope the diagnosis and treatment of pulsion diverticula of the esophagus have been greatly simplified.

In the case here reported not only was an absolute diagnosis possible, but also the exact position and dimensions of the diverticulum were ascertained. After a long and resultless medical treatment of the patient, a radical operation was done, in which the diverticulum was ligated and removed. This was accomplished through an incision made along the right sterno-cleido mastoid muscle at the level of the hyoid bone. The macroscopical and microscopical examination of the pouch showed that it was of traumatic origin; a pharyngo-œsophagocele traumatica. The author recommends an early operation in all such cases. Up to this time the operative procedure has proven entirely satisfactory, since there have been no recurrences in those cases in which the diverticulum was successfully removed.

The Diagnosis of Deep-Seated Diverticula of the Œsophagus.—ZWEIG, Berlin (*Deutsche Medicinische Wochenschrift*, August 15, 1901).—In connection with the report of four cases of deep-seated diverticula of the esophagus, the author describes a simple method of differential diagnosis. It frequently becomes necessary to differentiate between an idiopathic dilatation and a diverticulum. In such cases two gastric sounds are introduced, the one until it reaches the point of obstruction in the œsophagus, the other into the stomach. A small quantity of methylene blue solution is poured through the former into the dilated œsophagus. The tube in the stomach is now slowly withdrawn; if the methylene blue solution is contained in a simple idiopathic dilatation of the esophagus, some of it will pour out through the withdrawn tube when it comes in contact with the liquid. If it be contained in a pouch or diverticulum, none of it will pass out with the tube. This method is simple, and proved satisfactory in the four cases.

In all of them the murmur described upon swallowing was absent; gastro-diaphane revealed nothing, and the Roentgen rays were successful in one case.

Diagnosis of Pharyngo-Esophageal Pulsion Diverticula.—SCHMILINSKY, Hamburg (*Deutsche Medicinische Wochenschrift*, No. 33, 1901).—This case presents a typical pharyngo-esophageal pulsion diverticulum. The post-mortem revealed its existence on the posterior wall at a point uniting the pharynx and œsophagus. It was about 4 cm. in depth, and its opening admitted of the introduction of the little finger. The diagnosis was made intra vitam through the aid of the Roentgen rays and the œsophagoscope. The symptoms of the patient were those of obstruction of the œsophagus. The employment of the Roentgen rays permitted the exclusion of aneurism of the aorta, even though some of the physical signs pointed to the existence of such.

The simultaneous use of the esophagoscope and sounds enabled the author to make an unquestionable diagnosis, which, in fact, was verified by the specimens obtained from the post-mortem. The introduction of the metallic sound was

checked, as was shown by the X-rays, at a point corresponding with the arch of the aorta. The ingestion of bismuth, however, cleared up any doubt as to the cause of this obstruction, producing a dark field at the point of hinderance.

The author recommends, as the result of very satisfactory experience, the use of the esophagoscope and the Roentgen rays in these cases.

Traumatic Stricture of the Esophagus.—BUNTS (*The Medical News*, November 23, 1901) reports eight cases of stricture of the esophagus caused by the accidental swallowing of lye. He used in every case a series of graded, double-bulbed, olive-shaped bougies. On each staff there are two bulbs, the first being smaller than the second. This seems to permit one to follow up the advantage gained by passing one bulb, by the immediate passage of one a size larger. Much depends upon the depth and degree of the stricture as to the rapidity with which this dilating process may be carried out. It was found unnecessary to resort to such radical measures as retrograde dilatation, gastrostomy or gastrotomy. In one case of seventeen years' standing, this gradual process proved quite successful.

Chronic Ulceration of the Stomach Simulating Cancerous Disease: Relation of a Case of Gastro-Enterostomy with the Murphy Button; Recovery.—ROSS and O'REILLY, Ontario (*Philadelphia Med. Journ.*, November 9, 1901), report a case in which the gastric symptoms pointed to the existence of carcinoma of the stomach. The patient, who was but twenty-eight years of age, declined rapidly, in spite of therapeutic measures. The symptoms were chiefly those of obstruction of the pylorus. They had extended over such a period of time as to indicate the presence of an ulcer, but the thickening that could be distinctly made out led to the belief that carcinoma had developed on the base of the ulcer.

An operation revealed a growth at the pylorus, involvement of the perigastric lymphatic glands. The stomach wall looked exactly as it does in cancer. The case was considered hopeless, and it was decided to give temporary relief through gastro-enterostomy. Eleven months after the operation the patient weighed one hundred and forty pounds, was the picture of health, and presented no gastric symptoms whatever. The tumefaction apparently disappeared entirely.

Are not Some Patients Said to be Afflicted with Gastric Ulcer Really Suffering from a Different Disease?—W. HALE WHITE (*Lancet*, June 29, 1901), maintains that many cases occurring, especially in women, and classified as gastric ulcer, are really instances of some other undescribed malady. He suggests that this disease occurs between the ages of twenty and forty, its chief symptoms being gastric pain, nausea, and hematemesis. These symptoms are not dependent upon ulceration of the stomach, any ulceration that may be present being quite superficial, and no more than might occur secondarily to the hemorrhage. In these cases, though the gastric symptoms extend over years, the patient is not wasted, and has none of the mechanical effects of gastric ulcer, such as adhesions, pyloric stenosis, or subphrenic abscess, etc.

The prognosis is good, though relapses are frequent. The disease is probably related to chlorosis, since so frequently associated with it. Operations and post-mortems have frequently failed to reveal ulcerations in such cases. The author recites a number of them in support of his view.

Acute Dilatation of the Stomach, with Illustrative Cases.—THOMPSON, London (*Lancet*, October 26, 1901).—Acute dilatation of the stomach is probably not so infrequent as supposed. Various degrees of severity may be found between the slighter forms, such as occur in acute specific fevers, and the most severe and rapidly fatal cases. Treatment of the severer forms has proven of no avail in checking the disease. Four cases are reported by the author: one is an example

of acute dilatation suddenly supervening upon a chronic one, consequent upon a pyloric tumor; the second followed a surgical operation for renal calculi; the third followed an exploratory abdominal section, and the fourth occurred as a complication of pleurisy and pneumonia.

All cases may be arranged in the following groups: (1) those in which the dilatation occurred without any apparent cause, and in which after death no other lesion was found; (2) those in which after death some other lesion has been found; (3) those in which the dilatation has followed some surgical operation and in which after death no other lesion is found. There is also a group of cases in which in debilitated subjects the ingestion of a large quantity of badly masticated food appears to have been the exciting cause. In many cases dilatation of the stomach is probably the local manifestation of general collapse.

A Case of Duodenal Ulcer with Retroperitoneal Perforation.—WAGNER, HADAW (*Muenchener Medicinische Wochenschrift*, August 27, 1901).—Perforation is the most frequent complication of duodenal ulcers. As a rule this takes place into the peritoneal cavity, or into one of the neighboring organs. If the ulcer occupies a portion of the duodenum not covered by peritoneum, it may rupture posteriorly without involving the peritoneum in any way, and may lead to an abscess in the inguinal region. Such was the case in this patient. Besides the usual symptoms of duodenal ulcer, a tumor appeared in the inguinal region, containing a dark brown fluid. A diagnosis of retroperitoneal perforation of an ulcer on the posterior wall of the duodenum was made. The patient was too weak to undergo gastro-enterostomy. The post-mortem verified the diagnosis. A sound introduced into the perforation, passed along the spinal column just under the peritoneum, and appeared in the fistulous opening over Poupart's ligament.

The Ameba in Epidemic Dysentery.—JAEGER, Koenigsberg (*Berliner Klinische Wochenschrift*, September 9, 1901), observed, during two distinct epidemics, some thirty cases of dysentery. In all of them he demonstrated amebæ corresponding in all of the chief characteristics with those described by Kartulis in Egyptian dysentery. They differed from the harmless protozoan species found in the intestines in the following characteristics: They co-exist only with the dysenteric process. Their number and activity depends upon the duration of the case, being greatest in the earlier stages. They are found in greatest numbers in stools composed of pure blood, pus and mucus, and decrease as the stools become feculent. They have the power of taking up red blood corpuscles. The harmless forms are easily cultivated; these with the greatest difficulty. They are pathogenic for cats. The author succeeded in infecting three out of four. Many epidemics of dysentery have been reported in which the amœba could not be demonstrated. This points to the existence of two forms of dysentery: in the one the ameba is the exciting cause; in the other, such organisms as are described by Flexner, etc.

The author feels that his opportunity to observe the ameba in two epidemics in Northern Germany enables him to reach important conclusions as to their pathogenicity.

The Treatment of Dysentery.—PLEHN, Kamerum (*Deutsche Medicinische Wochenschrift*, September 26, 1901).—In spite of objections raised to the calomel treatment of tropical dysentery, the author still maintains that it gives ideal results. In support of this treatment he presents the records of thirty-eight cases treated in the European Hospital within ten months. Of these, two died, four had relapses, fourteen were very light, and nineteen severe. It is in the latter class that the efficiency of the treatment was best shown. As soon as dysentery is suspected the patient is given an ounce of castor oil. Following this a half to one grain of calomel is given every hour until twelve doses are disposed

of. This is kept up for three or four days, together with the necessary hygienic measures for preventing stomatitis. Should this occur in spite of these precautions, it is not necessary to interrupt the treatment. The calomel is followed by ten-grain doses of subnitrate of bismuth twelve times daily for three days. During this time the bowels should be evacuated when necessary. Milk diet is preferable where practicable. This is not always possible in the tropics. Great care should be given to the diet for months after the dismissal of the patient, in order to prevent relapses. The action of calomel in dysentery is attributable to its antiseptic qualities.

Three Contributions to the Pathology of the Omphalo-Mesenteric Duct and Meckel's Diverticulum.—KARAJAN (*Wiener Klinische Wochenschrift*, July 25, 1901).—The first case, a patient now twenty years of age, had, during his first year of life, an umbilical fistula, through which feces was frequently evacuated. It healed over, but ruptured a few times in the course of two years, emptying a quantity of pus. During his later years he had occasional paroxysms of pain in the right inguinal region accompanied by vomiting, constipation and fever. At the time of his admission to the hospital he presented these and other symptoms of appendicitis. An operation was done, revealing a persisting omphalo-mesenteric duct that had undergone pronounced inflammatory processes. The umbilical end was completely obliterated while the intestinal end was patent, thus forming a sort of diverticulum. Diverticulitis, and consequent obstruction of the bowel presented symptoms that were mistaken for appendicitis.

The second case was in a male, thirty-eight years of age, presenting symptoms of peritonitis and intestinal obstruction. The surgical operation and subsequent post-mortem revealed a long Meckel's diverticulum, gangrenous almost in its entirety. Its free end was attached through old inflammatory adhesions to the mesentery, and ended in an abscess cavity containing a quantity of pus and two ascaris lumbricoides. An acute obstruction of the bowel had occurred through the incarceration of a portion of the small intestine in the loop formed by the diverticulum.

The third case was one in which Meckel's diverticulum was found adherent to the wall of a hernial sac, in a man thirty years of age. The patient had had no symptoms referable to the diverticulum, or any inflammatory processes within it which might have resulted in the adhesions between it and the hernial sac.

Two Cases of Intestinal Obstruction Diagnosed by the X-Rays.—RUDISJICINSKY (*New York Medical Journal*, September 28, 1901).—The diagnostic value of the X-ray in medicine can no longer be disputed, two cases in the experience of the author demonstrates its great value in determining the cause and position of intestinal obstruction. In the one case a foreign body, swallowed by a boy ten years of age, produced complete obstruction. Operation was contemplated. The Roentgen rays were employed, and the body was located at the ilio-cecal valve. Hypodermic injections of atropine were employed, and the body passed without operation.

In another case invagination of the lower portion of the ileum was suspected. The X-rays revealed a foreign body located just under the umbilicus. Operation verified the X-ray findings.

The author recommends the ingestion of an undigestible pill and the subsequent employment of the X-rays to determine the location of an intestinal obstruction. The pill, containing a bit of lead, is stopped in its onward course at the point of obstruction. The point may then be noted on the fluoroscope.

Atony of the Intestines Treated with Physostigmin.—C. VON NOORDEN, Frankfurt (*Berliner Klinische Wochenschrift*, October 21, 1901).—The action of phys-

sostigmin upon the muscles of the gastro-intestinal tract has not been properly appreciated and utilized by physicians. The veterinarian only has realized its usefulness in evacuating the bowels through its creation of increased peristalsis. During the past year the author has used this drug in the treatment of certain gastro-intestinal disturbances and has realized splendid results. He considers the fears that have heretofore existed with reference to its use unfounded, and advises its more liberal employment in the future.

It was found especially efficacious in relieving tympanites, even as it is met with in typhoid fever. The action was in every case prompt and satisfactory. It is best to begin with small doses (0.00025) and gradually increase to the maximum dose (0.001) if necessary. The judicious use of atropin will control any unpleasant symptoms which may arise from the employment of this drug.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

The Diagnostic Value in Kidney and Abdominal Surgery of an Examination of the Functions of the Kidney.—CASPER (*Centralblatt fuer Chirurgie*, November 2, 1901).—The author examined separately specimens of urine from the two kidneys according to the method proposed by himself and Richter, namely, determined the amount of nitrogen (N), the amount of sugar produced by the injection of phloridzin (Sa), and the reduction of the freezing point (D). In cases where the kidneys were healthy he got equal values from both, but where one organ was diseased all three figures were smaller than on the healthy side. In a case of right-sided renal colic the findings were: right, D, 0.95; Sa, 0.8; N, 0.24; left, D, 1.06; Sa, 1.2; N, 0.38. An operation showed that there was really a stone in the right organ.

A second case was most interesting: there appeared clinically a tumor where the right kidney should have been, but where the above tests were made it was seen that neither kidney was functionally diseased; so the author concluded that the tumor must be something else. At the operation it was proven that the tumor was an adenoma of the suprarenal capsule, which had grown around the kidney.

A third patient complained of some pain in the left side, and the kidney was felt to be slightly enlarged; examination of functions showed: right, D, 1.64; Sa, 1.6; left, D, 1.67; Sa, 2.07; showing that the left kidney, even if diseased, was capable of more work than the right. At an operation it was found that several large cysts lay on the surface of the organ, but did not communicate with the interior. In the next case a correct differential diagnosis was made between pyonephrosis and an immense retroperitoneal abscess. In later cases the author succeeded in preventing kidney operations from being made on cases of gall-stones, as well as on cases of nephralgia.

Gunshot Wounds of the Abdomen.—ROBINSON (*The Kansas City Medical Record*, October, 1901).—In the Crimean war ninety-two and five-tenths per cent. of the British shot in the abdomen died, and since the introduction of asepsis seventy per cent. of the one hundred and sixteen men in our own army shot through the same region in the years '98 and '99 met a similar fate. Of course the explanation of this fact that such wounds are much more highly fatal in war than in civil life is that a much longer time must elapse during campaigns before a laparotomy can be performed. The Philippine and Boer wars have

taught us that a greater per cent. of these cases recovered without an operation than with it. The author saw forty-five such cases, of which eight died before help could be rendered. Thirty were treated without operation and two-thirds of them got well. In fact, all sort of visceral injuries were known to recover without a symptom.

Carcinoma of the Cæcum.—MAYO (*The Journal of the American Medical Association*, October 19, 1901).—The technique is described as follows: Through a lateral incision the peritoneum along the outer wall of the cæcum and colon is divided, the tumor raised and the vessels tied. The colon is then cut across and closed, and after division of the ileum the smaller gut is connected to the larger by an end-to-side anastomosis. The author reports two successful cases. His first patient was thirty-eight years of age, and the diagnosis, appendicitis. The cæcum and eight inches of the ileum were removed, a lateral anastomosis being made with the Murphy button. Two years after the operation the patient is free from recurrence. The second case was somewhat more extensive, necessitating removal of fourteen inches of the ileum. Here a lateral anastomosis was made with the transverse colon, and this patient, like the other, made an uneventful recovery.

The Operative Treatment of the Intestinal Perforations of Typhoid.—HARTMANN (*Bull. et Med. de la Soc. de Chir. de Paris*, T. xxvii., p. 8).—We must agree with Keen that surgical interference is to be regarded as possessing the greatest value in these cases. The later in the disease the perforation, the more favorable the prognosis. Of those operated upon during the first three weeks of the typhoid, 18.75 per cent. have been said to recover, while of those similarly treated after three weeks, 52.38 per cent. were so fortunate as to get well—a surprising difference. Where the operation was done during the first twenty-four hours after the attack, 25.33 per cent. were saved—only 13.63 per cent., however, when it was done after this period.

A Plea for Immediate Celiotomy in Penetrating Gunshot Wounds in Abdomen in War.—FLAGG (*Journal of the Association of Military Surgeons*, August, 1901).—This author champions this idea, although he is aware that military statistics are all against it. He says that the fatality after wounds with small caliber bullets is not less than by those of large size, as is commonly supposed; for in the Spanish-American war sixty-five per cent. of those shot through the abdomen died, while in the last six wars in which the old-fashioned bullet was used but sixty-one per cent. suffered a like fate.

The only question of operation in such cases is one of the facilities at hand, because transportation is certainly better borne by a man whose intestinal wounds have been closed than by one in whom they have not. The author shows that conditions favorable to operation can almost always be secured, so the question really resolves itself into the finding of a surgeon trained to do the work. Why need these patients die in military and not in civil practice?

Gunshot Wounds of the Stomach.—DOUGLAS (*The Southern Practitioner*, October 7, 1901).—If the hemorrhage be slight, the wound is likely to be one of the stomach alone; and the reverse is also true. Leakage is earlier and more frequent in stomach than in intestinal wounds. The best guide for finding a small hole is the discolored area which surrounds it. When blood is vomited, we can be almost certain that the stomach is perforated. Almost all cases die if not operated upon; but seven out of the eleven instances which the author has culled from the literature recovered after operation.

Failure of Gastro-Enterostomy for Pyloric Stenosis, and Its Prevention.—WEBER (*Beiträge zur Klinischen Chirurgie*, Bd. xxxi., Hft. 1).—The "circulus vitiosus" is by all means the chief accident to be dreaded in this class of surgery. The author thinks this is prevented best in one of two ways: either by the v. Hacker posterior method, or by supplementing the original operation by an entero-anastomosis. Lindner, of Berlin, has been following this latter method, in connection with the Woelfler anterior operation, for a number of years, and with almost uniformly good success. Atony of the stomach and muscular insufficiency of the heart have been the chief undesirable factors with which he has had to contend.

A Case of Laparotomy for Multiple Septic Abscesses and Intestinal Adhesions.—MAYLARD (*The Lancet*, October 12, 1901).—When first seen, the patient presented alarming symptoms of intestinal obstruction, and laparotomy was at once decided upon. As most of the trouble had been referred to the left flank and as this part of the abdomen was further the seat of most complaint, the incision was made here. No sooner was the abdomen opened than a mass of pus gushed forth. But no systematic attempt was made to find its point of origin, for the reason that the patient suddenly went into a collapse; thus the operator was obliged to pack the cavity and put her to bed. All went well for nine days, when symptoms of obstruction set in once more, and on incision another large pus cavity was found. Our author also divided a peritoneal band, and straightened out a torsion, the patient recovering.

Sigmoidopexy for Prolapsus of the Rectum.—MOTT (*Charlotte Med. Jour.*, October, 1901).—Objection is made to excision of the prolapsed portion of the rectum as stitches do not always hold, a large amount of blood is often lost, and serious infection may occur. The following method is preferred by the author: He passes a rectal bougie up to the sigmoid flexure, replacing at the same time prolapsed gut. Then an incision down to the gut containing the instrument in the left iliac region, and the part of gut surrounding the end of bougie sutured to the anterior of abdominal wall.

The author did this operation on a patient forty-two years of age who had an eight-inch prolapse; and so successful was the procedure that there was no tendency to recurrence on bearing down. In addition, sensitiveness and inflammation of the prolapsed portion disappeared before the patient was out of bed.

Subcutaneous Rupture of the Intestine.—KARPLUS (*Wiener Med. Wochenschrift*, p. 1, No. 29).—The subject is illustrated by the most interesting case of a man who was wearing a truss for inguinal hernia. The apparatus was struck a heavy blow just over the button, with immediate symptoms of vomiting, pain, etc., which persisted for a few hours and then passed away. At the expiration of two days the man went into a collapse and gave every evidence of perforation of the bowel. At an operation undertaken six hours later there was found a perforation in a gangrenous area, this latter no doubt resulting from the blow above mentioned. The case terminated fatally.

Gunshot Wounds of Abdomen.—BALDWIN (*The Cincinnati Lancet-Clinic*, November 2, 1901).—The histories of two interesting cases were related. Each was operated upon and recovered. The first patient was a young man twenty-one years of age, who had been shot with a thirty-two caliber bullet. At the operation eight punctures of the small intestine and three of the mesentery were found. So good was the result obtained that three weeks later the young man resumed his work in college.

In the second case, as in the first, the operation was performed a few hours after the receipt of the injury. This latter patient sustained eleven separate

wounds in the gut and three in the mesentery. Resection by use of the Murphy button was done, the button passing on the tenth day.

In all such cases the author practices drainage, and his results would indicate the wisdom of his choice.

Splenectomy—Axial Rotation and Death of Spleen; Recovery.—BENNET (*Texas Medical News*, October, 1901).—The patient presented herself with great pain in abdominal region, the left half of which was occupied by a large sensitive mass. This latter had been present for four years, and about two months previous to operation had suddenly commenced to grow, and continued till double its former size. From the patient's description it is sure that a certain degree of peritonitis must have accompanied these manifestations. At the operation the tumor was found to consist of the spleen, which had been twisted five or six times on its axis. Numerous adhesions were present, and no hemorrhage ensued when the organ was torn, showing that circulation had been entirely cut off.

Chronic Peritonitis.—SUPINO (*Gazzetta Degli Ospedali*, September 29, 1901).—As a satisfactory and complete recovery generally takes place in these cases, the author writes the logical conclusion that operation is not advisable. The general purpose of the surgeon who is called upon to treat such a case must be, then, first to tone up the resistive powers of the patient, and, second, to cause absorption of the ascites. The former purpose is best accomplished by the use of iron and arsenic, the latter by local application of the tincture of iodine. Durant's iodo-iodid has been injected subcutaneously, and with good effect, in those cases where there has seemed to be a tuberculous lymphatic habitus. Prominent mention is also made of the advantages to be derived from proper climatic surroundings, especially the Italian sea-coast.

Surgical Interest of the Subperitoneal Tissue.—TAYLOR (*Georgia Journal of Medicine and Surgery*, October, 1901).—There is a vast amount of literature which concerns itself with the peritoneum, but scarcely anything is written of the subperitoneal tissue. This latter not only underlies the peritoneum itself, but is continued as processes around all of the structures which pass out of the abdomen. Thus it is seen that a post-peritoneal abscess originating in the appendix may spread in almost any direction and to almost any locality.

The author next goes into a gross and microscopic discussion of the tissue under consideration, which is too lengthy for reproduction here. It may be the seat of tumor formations, inflammations or atrophic changes, while collections of pus, blood, lymph and other foreign substances may take place within this tissue.

Intestinal Obstruction.—BUNTS (*Cleveland Medical Journal*, October, 1901).—Several interesting cases are reported from the author's experience, and serve to teach the important lesson that surgery in such a field can be of avail only if practiced early. In case No. 1, a gall-stone was impacted in the intestine; in No. 2, no anatomical diagnosis was possible at the operation, though it is supposed that a volvulus must have existed. In two further cases the obstruction was due to an inflammatory band, while in the fifth, intussusception was the cause, an infant being the patient. Faecal impaction brought about a stoppage in the next patient, while in the seventh instance, strangulated hernia was at fault. In Nos. 8 and 9 there were constricting bands, in ten an annular cancer, in eleven a volvulus, and in twelve an intussusception; this last patient made a temporary recovery after operation, but the trouble recurred and he died on the 13th, a few weeks later. Ten of the above individuals were operated upon, and of the number seven died, most of them from the exhaustion coincident upon a late operation; consent to an early one being refused in most cases.

Removal by way of the Stomach of a Foreign Body from the Œsophagus.—WILMS (*Deutsche Zeitschrift fuer Chirurgie*, Bd. lx., p. 348).—This most unique operation was performed upon a patient who had swallowed a set of false teeth. After an incision in the median line above the umbilicus, a circular purse-string suture was made in the anterior wall of the stomach, and in the middle of the circle an incision was made. Into this opening in the viscus the finger was thrust, and after the purse-string had been drawn tight around it, was carried on into the cardia, the stomach wall being inverted before it. The foreign body was in this way quite easily reached, and after its extraction the continuity of the stomach wall was re-established and the patient made a perfect recovery.

The Knot Within the Lumen in Intestinal Surgery.—CONNELL (*Journal of the American Medical Association*, October 12, 1901).—This article marks an advance in the surgery of the hollow viscera. Not only has the author shown by his logical theoretical deductions that his method is the best, but can demonstrate by numerous animal experiments as well as by nineteen operations on the human that this suture is free from most of the objections which have rendered the older ones so difficult and dangerous, even in the hands of the most accomplished surgeons. For the technical details the original article must be consulted. The author's claims for the superiority of his form of stitch are as follows: 1. Less danger of leakage at stitch-hole. 2. No yielding of the stitch. 3. Amount of adhesion around suture-line diminished. 4. Small diaphragm. 5. Less danger of gangrene. 6. No foreign body, sutures all pass away. 7. Time diminished.

Surgery of the Biliary Passages.—DEAVER (*The International Journal of Surgery*, October, 1901).—Gall-stones occur in one out of every ten people, but of the whole number not more than five per cent. are pathological as regards manifestations. However, in any case, the patient may suddenly have life or health threatened; in fact, the biliary apparatus must be taken into consideration in making the diagnosis of every obscure disease of the upper part of the abdomen. The colic is caused by an inflammatory spasm of the bladder and ducts, nature making an effort to remove the stones; this is not often successful however. Each attack predisposes to others and at the same time renders an operation more difficult; then when icterus has come, serious hemorrhage is likely, and still we cannot often postpone operation in an icteric patient. The development of phlegmonous cholecystitis is almost always fatal. Serious bleeding has been met by the author by packing, the use of opium and saline infusions. Where the bladder is to be drained, this is preferably opened into the intestine, though external fistula can be more safely made. In most cases an inflamed gall-bladder should be removed like an inflamed appendix, and the surgeon should accomplish this before serious anatomical change has taken place, and before the kidneys, etc., have been damaged by unusual materials which they have been called upon to excrete.

THERAPEUTICS.

IN CHARGE OF

WALTER BAUMGARTEN, M. D.

The Treatment of Croupous Pneumonia Critically Considered.—P. R. PEL (*Therapeutic Monthly*, July, 1901. Transc.).—In no disease is it so difficult to draw trustworthy conclusions in regard to any given method of treatment as in pneumonia. Many factors, such as age and circumstances, social, local and epidemic, influence the course of the disease, and preclude just comparisons between the material of individual observers. A review of the literature leads Pel to the opinion that we as yet possess no remedy by means of which we are able to shorten the course of pneumonia, or can immediately influence favorably the pathological process itself. It would be a fact as yet unparalleled that a disease which, like pneumonia, is conditioned upon a distinct kind of organism, should be favorably affected by heterogeneous remedies like pilocarpin, salicylate of sodium, the iodides, digitalis, quinine, etc. Therefore, we should not, he thinks, interfere in the pathological process, so that the natural healing qualities of the diseased organism may perform their duty unimpeded. A pneumonic patient is better taken care of by a quietly observing physician who only treats symptomatically than by one who thinks he is able to stifle the disease in its incipency by heroic so-called specific remedies.

But non-interference means doing something more than looking on and letting matters go by the will of God. It is the first duty of the physician in every case of pneumonia to look after hygienic-dietetic directions: pure air, neither too hot nor too cold, frequent change of position of the patient, careful attention to skin and mouth. The diet should be liquid or pulpy, strengthening and nutritious, and should be administered in frequent small doses. Milk and milk foods, soup, bouillon and eggs should be given. Abundant drinking not only quenches severe thirst, but also promotes elimination, and, consequently, the purification of the juices of the body. Headache is often made bearable by application of cold. Dover's powder is often the best remedy in the first days for the irritation of the cough, the stitch in the side, and the difficult expectoration. If respiration is rendered difficult by severe stitch in the side, Pel considers frequently repeated injections of morphine at the site of pain a most efficient measure. "Whoever is afraid of morphine may try to allay the pain in the chest by subcutaneous injections of carbolic acid;" in milder cases moist, warm poultices or ice-bags may be used, according to individual reaction. Stools should be regulated by some purgative. Sleeplessness should not be combated with hypnotics, unless absolutely necessary, in which case Dover's powder or small injections of morphine are preferable. Toward the end of the first week, when râles begin to appear, Pel usually administers an expectorant in order to liquefy the secretions and to facilitate and promote expectoration.

At the time of the crisis, and after, the functions of the heart and of the nervous system should be carefully watched; but Pel prefers to refrain from unnecessary excitants. During convalescence he does not allow the patient to rise until all the local symptoms have disappeared, the strength returned, the condition of the blood improved, and the pulse has become strong and normal. Tonics, principally iron, may favor the cure of the remaining anæmia. The physical strength will return with nutritious food.

The irregular, atypical pneumonias, however, make higher demands upon medical science. In a general way the pulmonary symptoms step into the background while those of the disturbed cardiac and cerebral activity become more prominent; almost always cardiac weakness, as well as weak-

ness of the body, first demand attention. They require a stimulating treatment, and success depends upon seizing the right expedient and the right moment. Of stimulants the first is alcohol. Its administration is indispensable in alcoholics, and it would be a grave error of judgment to withhold it from individuals who are accustomed to it. It is also a prophylactic against collapse, general debility, and cerebral symptoms. The time before and after the crisis is an important one for the administration of alcohol. It should be given warm, in frequent, small doses; champagne is an excellent form. The most reliable stimulant in threatened heart weakness is camphor, primarily given in small doses by mouth; in more threatening danger to life, in large doses subcutaneously in combination with ether.

As a stimulating and refreshing procedure, great value lies in regular sponging of the usually dry, hot skin with cold or tepid water to which a little vinegar, cologne water or brandy has been added. These ablutions may be done every one, two or three hours regularly. The irritation of the skin, so produced, acts reflexly upon the functions of the vital bulbar centers, and may secondarily influence the elimination of injurious elements by increased metabolism. In regard to cold baths in pneumonia, clinical experience differs widely; Pel thinks that, considering the number of contra-indications, one may well forego the practice.

Attacks of pulmonary œdema are almost exclusively the consequence of cardiac weakness, and should be considered as engorgement manifestations. In such cases stimulants, together with skin irritants, should be employed; in rare cases venesection. Extensive sinapisms and injections of camphor have proven most effective.

For the cerebral symptoms, which often appear after crisis, principally in drunkards, but often in other pneumonic patients, chloral hydrate constitutes the most effective remedy.

The Treatment of Pneumonia.—DE LANCEY, Rochester (*Jour. A. M. Assoc.*, November 9, 1901, p. 1237).—The most serious element in pneumonia is the toxæmia, which causes degeneration of the heart muscle, while it at the same time increases peripheral resistance. The second element in degree of seriousness is the amount of lung involvement existing at any one time.

The patient should be put upon a fluid and, so far as possible, sterile diet. A large amount of pure water should be administered in order to flush the excretory organs; it may preferably be given in small quantities at frequent intervals.

The first aim of treatment should be the elimination of toxins. As the lungs, and often the kidneys, are directly involved in the morbid process, the bowels and skin remain as the eliminative organs. (1) At the beginning of an attack the bowels should be opened by an initial dose of calomel (0.5 gram), and kept so by occasional doses of saline laxative. This will not only aid in elimination, but will often help to relieve the distention of the right heart. (2) "To keep the skin active there is nothing more efficacious and less harmful than the proper use of the hot mustard foot-bath. This can be given with next to no disturbance of the patient, the tub being put into the bed, with most excellent results as far as sweating is concerned. These baths may be kept up at four-hour intervals throughout the course of the disease." Frequent and thorough cleansing of the mouth with a mildly antiseptic wash should be carried out.

The second indication is the support of the heart. The two most useful stimulants in pneumonia are strychnine and alcohol. Stimulation should not be deferred until the heart begins to fail. As soon as the diagnosis is made, strychnine may be begun in doses of 0.002 grm. every four to six hours, per mouth. As the symptoms increase in severity even as much as 0.004 grm. may be given hypodermically every two hours, with the best results. Alcohol is our

next best stimulant, but in some cases seems to produce decided cerebral disturbance. It may then be replaced by ammonium carbonate or aromatic spirits of ammonia. These drugs are usually well borne by the stomach when combined with liquor ammonii acetatis, and administered in milk.

The local treatment of the lung is of importance. "As soon as a portion [of the lung] is shown by physical examination to be in a state of beginning congestion, the prompt and thorough application of leeches, wet cups or dry cups over the part will often stay the process there." "If dry cupping is resorted to, it should be very thorough, the skin and subcutaneous tissue rising up in the cup to as great a height as possible, and turning blue or purple while there." The cups should be left on for half an hour, and the process repeated every four to six hours. With ice the author has not produced the relief of congestion desired.

If evidence of overdistention of the right heart appears, such as cyanosis, decreasing tension in the pulse, enlarged liver, pulsating veins, and an increase of the area of heart dullness to the right, prompt relief is often gained by removal of eight, ten or twelve ounces of blood from the median vein in the forearm. In cases in which heart failure is imminent without signs of dilatation, hypodermic injections of sterilized normal salt solution may tide the patient over his critical condition. Injections of salt solution by rectum are usually less prompt and far-reaching in their effect.

In cases of restlessness and sleeplessness chloralamide, chloral, Dover's powder, morphine, or hyoscin hydrobromate may be recommended.

Further Report on Serum Therapy in Croupous Pneumonia.—J. C. WILSON and H. F. PAGE (*Therap. Monthly*, July, 1901).—As a result of the cases upon which this report is based, the treatment of pneumonia by serum therapy has been discontinued in the wards of the German Hospital in Philadelphia, where the work was done. The serum treatment was added to the usual plan, which consisted in the systematic administration of Dover's powder, the application of ice-bags to the affected region of the chest early in the course of the disease, the use of calomel, strychnia, alcohol, inhalations of oxygen when necessary, and other symptomatic treatment. The injections of serum were given in most instances directly after the patient's admission to the ward. The serum was administered hypodermically in quantities varying from 20 c.c. to 1080 c.c., the individual doses being 20 c.c. every three or four hours. The effect of each dose varied greatly with the freshness of the serum. This effect consisted in slight lowering of the temperature and the pulse frequency, mitigation of the pain, and a tendency to drowsiness. It was more marked in the first eighteen cases than in the subsequent ones. The duration of the disease was usually from five to fourteen days, ending by crisis or rapid lysis, from which it appears that no effect was produced upon the length of the disease.

The total number of cases treated with serum was thirty-five; of these ten died, giving a mortality of twenty-eight and one-half per cent. The authors have also collected from the literature one hundred and sixty-two cases of pneumonia treated with serum, of which twenty-seven died, giving a mortality of sixteen and six-tenths per cent., which can scarcely be deemed an improvement.

The Treatment of Chronic Bronchitis in the Elderly and Aged.—HARRY CAMPBELL (*Brit. Med. Jour.*, October 12, 1901).—In the treatment of chronic bronchitis four etiological factors are to be considered. These are: (1) Its toxic character, which is evident from its frequent association with gout and Bright's disease. Other toxic agents are alcohol and impure air arising from poor ventilation. The indications to be drawn from these considerations are, therefore, restriction of the meat diet, attention to the efficient functional activity of the skin and kidneys, avoidance of alcohol and general hygienic conditions.

(2) Chronic bronchitis is frequently due to poor general condition of the patient, in which the normal resistance of the tissues is diminished. (3) The frequent association of obesity with chronic bronchitis forms a vicious circle, the obesity embarrassing the circulation and the sedentary life followed in the attempt to relieve the cardiac distress fostering the obesity. An attempt should be made in every case, whether the overweight be great or not, to reduce, by restricting the carbohydrates, the body weight to a figure approximately normal for the patient's age and height. This restriction, in addition to the restricted meat diet, will give the patient a reduced daily quantity of food, which should be insisted upon until the normal weight has been attained. (4) Finally, respiratory exercises should be practiced in order to preserve the mobility of the thorax.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

A Bacteriologic Study of Acute Articular Rheumatism.—V. E. PREDTETCHENSKY (*Vratch.*, 1901, No. 24, p. 761; *La Presse Medicale*, November 16, 1901).—This author made a careful search for the bacillus of Achalmé in five typical cases of acute articular rheumatism. The best conditions of growth for this micro-organism were obtained by him by means of the following procedure: 0.5 to 1 c.c. of blood obtained by pricking the end of a sterilized finger was mixed with a slightly acid bouillon containing 1½ per cent. lactose, to which was added (one-third by volume) sterilized milk, according to the method of Lavtchenko. The air was driven out of the tubes and hydrogen gas used as a replacement.

At the same time this worker looked for the coccus described by Wassermann as causative of acute articular rheumatism, employing for this purpose a strongly alkaline bouillon, which Wassermann claims is the best medium for growing this coccus.

The bacillus of Achalmé was not observed in a single instance in these five cases. In three cases the cultures remained absolutely sterile (these cases being studied bacteriologically before the administration of sodium salicylate). In the two remaining cases the writer found a special micrococcus. At the end of twenty-four hours the milk in the tube prepared for study of the bacillus of Achalmé coagulated, the clot being perfectly formed at the end of forty-eight hours. This showed a micrococcus in pure culture, disposed in elements of two, three and four organisms, facultative aerobic and anaerobic. On solid media these micrococci grew out in short chains; on liquid media, in elongated chains.

Subcutaneous inoculation of these organisms into guinea-pigs produced a condition closely akin to acute articular rheumatism in man; the animals showed signs of great discomfort, presented febrile symptoms and swelling of the large articulations, with death eventually. At autopsy there was found the changes of inflammatory periarticular trouble, with a serous condition in the joints. A localized endocarditis on the semi-lunar segments of the aortic valve was found in one guinea-pig. The organism was recovered in pure culture from the heart's blood and from the serous effusion in the joints.

The author contends that this micrococcus is the causal agent of acute articular rheumatism. He will not state that this is the same organism as that described by Wassermann, nor does he maintain that all cases of acute articular rheumatism are caused by the same organism.

[In this connection, it might be well to speak of the micrococcus described

by Meyer, of Leyden's Clinic. It was a micrococcus, and produced the same changes in guinea-pigs as this organism described by Predtetchensky. There is no reference to Meyer's work in the article before us. Perhaps it is the same micrococcus.—ED.]

General Infection with the Enterococcus.—HULOT and ROSENTHAL (*La Presse Medicale*, November 6, 1901).—These authors report a very interesting case of general infection with the enterococcus described by Thiercelin and Rosenthal. They give clinical history, post-mortem findings and the bacteriologic report. Clinically, the patient, a woman of fifty-eight years, presented symptoms of general sepsis, with severe diarrhea. She went into semi-coma on entering the hospital, and died after some days in this state. Post-mortem, a greatly enlarged spleen was made out, weighing eight hundred and thirty grammes; also a ptosis of the abdominal viscera. The intestines were congested. Histologically, the liver showed some parenchymatous changes, principally in the cells which contain many nuclei deeply staining with eosin. The spleen showed evidences of congestion and hemorrhagic extravasations into the parenchyma.

Cultures of the heart's blood showed a diplococcus staining by Gram's method, apparently like the pneumococcus of Talamon-Fraenkel. Bouillon tubes inoculated with the organism showed it in short chains of four to six elements. At the end of several days, longer chains were seen. At the same time polymorphism was observed; the same chain would show smaller and larger cocci. A delicate growth took place on agar of small confluent rose-colored colonies. The morphologic and biologic characteristics of the organism clinched the diagnosis of "enterococcus." A rabbit inoculated with the organism into the auricular vein showed a small abscess at the point of inoculation without erysipelas. Mice died in twenty-four hours after inoculation, showing changes of septicemia and yielding the diplococcus in a pure state. White rats died, after four days, with septicemia and giving up the lanceolated and aureolar-like diplococcus.

The infection resembles that sometimes produced by the pneumococcus, just as the organism itself resembles the pneumococcus. The enterococcus is an organism which has been described by Thiercelin and Rosenthal, and which is thought by them to be an intermediary organism between the pneumococcus and the streptococcus. It is saprophytic and pathogenic, has a polymorphism which is precocious and peculiar to this micro-organism, and has considerable vitality. The organism is an inhabitant of the intestinal tract, and produces general infection or "enterococcie," as it is termed by the French, when the vitality is lowered, when there is sluggish movements of the intestines, and when there is as a predisposing factor old age, as in the case in hand. It produces a terminal infection in this way.

Changes in the Lymphatic Vessels of the Lung in Chronic Bronchitis.—WATANABE (*Virchow's Archiv*, Bd. clxv., Hft. 1).—Although it has been frequently noted that in chronic bronchitis there is an accompanying swelling and proliferation of the lymphatic glands, the exact pathology of the lymphatic vessels in chronic bronchitis has not received very much attention. The writer studied thirty-two cases of chronic bronchitis of different degrees, and found that even microscopically a marked participation of the lymphatic vessels in the process could be made out. These microscopic changes were visible as fine gray strands, which stood out more prominently where two lymphatic vessels crossed each other. Microscopically, the lymphatic vessels show evidences of inflammation, principally in the finer lymphatic vessels in the walls of the bronchi. The process is more severe on the periphery of the lymphatic vessels and grows less in degree as we go inwards. The process is essentially an acute one. It is seldom chronic. In cases of pure chronic bronchitis this involvement of the

lymphatic vessels is not to be made out so markedly as in cases of chronic bronchitis mixed with some other process, such as broncho-pneumonia, etc.

Fibro-Cystic Tumor of the Breast in Which the Majority of the Cysts are Lined by Stratified Epithelium-Like Cells.—GRIFFITHS (*Journal of Pathology*, November, 1901).—The author states that his case is an example of a very rare condition. The history and clinical findings were given, with the remark that removal of the breast was necessitated by the growth of a tumor at that site. Description of the specimen removed: The mamma is occupied by a large, slightly lobulated firm swelling, not adherent to the skin nor to the subjacent pectoral fascia. The nipple is slightly retracted. On section it is seen that the mass is, with the exception of a small portion near the periphery at one place, composed of cystic spaces, varying in size up to one-half an inch in diameter, which freely communicate with each other, and which are filled with a whitish boiled sago-kind of material. When the cystic tumor was opened, this sago-like material fell out easily, showing that it was not adherent to the walls of the cystic spaces in which it was lying. This portion of the tumor presents the appearance of a cystic fibro-adenoma. A section through that part of the tumor which has the usual appearance of a cystic fibro-adenoma, shows gland tubules and small cysts of varying sizes, lined by a single layer of columnar cells, which are tall in the unaltered gland tubules and somewhat reduced in size in the cysts. A section through the part containing the sago-like substance shows that the cysts themselves are lined, not by a single layer of columnar cells, but by a layer of squamous epithelia like that of the epidermis, and that the sago-like substance consists of aggregated epithelial scales.

Three Fatal Cases of Pellagra, with Examination of the Spinal Cords.—SANDWITH (*Journal of Pathology*, November, 1901).—Bouchard in 1854 first drew attention to the changes that take place in the spinal cord in pellagra. Tuzek in 1893 found in this disease sclerosis of the posterior columns and columns of Goll in eight fatal cases. In six cases there was also lateral sclerosis, and the lesions were found mostly in the dorsal region, but in one case there was also cervical anterior sclerosis. Marie in 1894 contrasted Tuzek's pellagrous sclerosis with the posterior sclerosis of tabes dorsalis.

Sandwith had the opportunity of studying three cases of this disease, with histologic examination of the spinal cords. The cases occurred in persons living in Cairo, Egypt. The cords were hardened in Mueller's fluid and stained with Marchi's, Weigert-Pal, aniline blue-black and Van Gieson's methods. In the first case there was some degeneration in the posterior columns, as shown by Pal's method. The degenerated root entered at the third lumbar, and could be traced up to the dorsal region. The posterior median columns were unduly pale, and the small wedge-shaped tract seen in the upper cervical region, just outside the anterior horn, probably was a well-marked Helweg's triangular tract, and therefore a normal condition. In the second case, well-marked degeneration of the posterior columns was present, evidently of root origin, as shown by the escape of one pair of roots—the dorsal region. There was an increase in the connective tissue in the area of the affected roots and some thickening in the walls of the arteries. The posterior roots themselves also showed marked degeneration in their extramedullary course.

The third case showed practically no change except possibly some slight alteration in the medullated sheath of certain fibers, as shown by the blue-black method. It is believed that the sclerosis of the posterior columns in these cases was of root origin, and that the increase of connective tissue in the posterior columns is secondary to the degeneration of the roots.

The Value of Our Present Methods of Blood Examinations.—JANOWSKI (*Centralblatt fuer Allgemeine Pathologie und Path-Anatomie*, Bd. xii., No. 20).—This writer gives a dissertation on the present methods of blood examinations, and if we are to believe what he says, there is no practical value to be attached to our examinations, so far as positively aiding the clearing up of a diagnosis is concerned. From a careful perusal of his paper, we heartily agree with him in a measure, but must nevertheless contend that our clinical diagnoses are often cleared up by a blood examination. This author attempts to disparage the value of the Widal test. While it is true that with the ordinary methods at our command, viz., the use of the dried blood method, as advocated first by Wyatt Johnson, of Montreal, the results are not always satisfactory, we must firmly state that the performance of the Widal reaction with the fluid blood, where we can practice exact dilution, should be attended with an almost exact measure of success, and that in this way "pseudo-reactions" are not to be met with. The author speaks truly when he says that too much reliance cannot be placed on these tests. Yet does not the converse hold true? Should too much reliance be placed on the clinical signs? It is highly necessary to consider the clinical signs and the blood examination *tout ensemble*. In such considerations they will be found to be of some certain value.

Cancerous Lymphangitis of the Lung.—TROISIÉRIER and LETULLE (*Archives de Médecine Experimentelle et d'Anatomie Pathologique*, Tome xiii., No. 2, 1901).—These observations are made by Troisier and Letulle with the hope of clearing up the obscurity of these pathologic conditions in the lungs. They say that the "cancer nests" found in metastatic cancer of the lung stand in relationship to the lymphatic vessels of the lung. The cancer cells are scattered throughout the lung through the medium of the lymphatic vessels. The cancer cells, in their flow through the lymphatic vessels, are impeded by the lymphatic glands. In some instances the intima lining the lymphatic vessels becomes involved in the cancerous process. This is especially apt to occur in the finer lymphatics, when the cancer cells are brought to a halt and then pounce upon the lining membrane of the vessels containing them. It is a metastatic process and means lymphangitis. Any alteration in this endothelial lining of the lymphatics is liable to make that part become the seat of a cancerous process.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

On the Treatment of Pyosalpinx by Means of Vaginal Incision.—BUERGER (meeting of Gynecological Society of Vienna. *Ref. Centralbl. fuer Gynaek.*, October 26, 1901).—There is no analogy between this treatment and the operative treatment of abscesses located in any other region of the body. In a pyosalpinx we have to deal with a secreting *mucosa* which is a shelter for the bacteria. After the pus has been removed the bacteria may regain their activity, causing a recurrence of the abscess after some time. The perimetritis, usually accompanying the pyosalpinx, will not be healed definitely even when the sac has shrunk completely. Therefore, incision through the vaginal vault should be made only under certain conditions. Fever is the most frequent and important indication for this operation. In the majority of febrile cases there is a formation of virulent pus, rendering the removal of the pyosalpinx *per laparotomy* very dangerous. Continuous fever severely impairing the condition of the patient or probability of

perforation of the abscess into the abdominal cavity, may necessitate immediate interference. Vaginal pan-hysterectomy must be thought of first, if the condition permits so large an operation, and if the operation is possible from a technical standpoint. If not, vaginal incision is the only resort. A further indication for this operation is found in cases in which we meet with a large, unilocular pus-sac, immediately adjoining the vaginal vault. Out of twenty cases treated by vaginal incision, in five a recurrence of the abscess was observed, although great care had been taken to open and drain every pocket, and, in several instances, the wall of the abscess had been sewed to the opening in the *cul-de-sac*. In ten of these cases the other tube became infected after some time; in five a radical operation was ultimately necessary. The remote results were very unsatisfactory. In the majority of cases the old symptoms returned, even grew worse. Thus vaginal incision is an operation necessitated only by certain conditions, and performed with the idea of obtaining a cure by making a radical operation at a later date.

The Ultimate Results of Operation for Cancer of the Uterus.—CHARLES P. NOBLE (*Phila. Med. Journal*, November 9, 1901) reviews briefly the recent literature concerning the status of operation for cancer of the uterus, and reports his own experience in this connection. He draws from the views expressed by prominent gynecologists the following conclusions: The majority of cases of cancer of the uterus, when they consult the surgeon, are too far advanced for the hope of a radical cure. German statistics indicate that it is less true now than it was ten years ago. This is a hopeful indication, as showing that the teaching of surgeons concerning the necessity of early diagnosis and early operation for cancer is beginning to bear fruit. It may be claimed confidently that at least ten per cent. of the cases of cancer of the cervix operated upon remain free of the disease at the end of five years, and may be considered cured. For timely operations of carcinoma of the corpus a good prognosis can confidently be given. It is evident that seventy-five per cent. of these cases are permanently cured by hysterectomy, whether vaginal or abdominal. The abdominal radical hysterectomy for cancer of the uterus, involving the removal of the pelvic glands and the parametria along with the uterus, is still upon trial.

Of thirty-two patients operated upon by the author, six are living and free from recurrence at the end of five years, which is equal to eighteen per cent. There are nine patients living and free from recurrence at the end of three years. The best opportunity for improvement in these results is in the direction of early diagnosis. It is the duty of the profession to recognize that cancer is curable. The falsity of the common doctrine of climacteric hemorrhages should be appreciated and taught to women. The use of the curette and a microscopic study of the scrapings is almost invariably essential.

Total Hysterectomy in a Child Three Years of Age for an Uterine Sarcoma.—J. LORTHOIR (*Journal de Chirurgie*, September, 1901).—A small tumor, supposed to be a myoma, was removed through the vagina in a girl of three. Three months afterward a recurrence was observed. By partial vaginal hysterectomy, a sarcoma was extirpated. Two months later the tumor again returned and total abdominal hysterectomy was performed. The child recovered. Examination showed that the tumor was a small, round-cell sarcoma, originating from the posterior wall of the uterus.

On the Therapy of Extrauterine Pregnancy.—KROENIG, Leipsig (*Congress Deutscher Naturforsch. u. Aerzte. Ref. Muench. Med. Wochens.*, October 15, 1901).—The knowledge of the fact that in ectopic pregnancy the developing *ovum* grows into the tubal wall, has necessarily influenced the therapy of this condition. A sharp differentiation between tubal rupture and tubal abortion can no

longer be sustained. In every case of abortion there are certain lesions of the wall of the tube. The rupture develops gradually. Since chorion villi can be detected in the pregnant tube in every case of abortion, the differentiation between complete and incomplete abortion should be given up. Therefore, from a theoretical standpoint, every case of extrauterine pregnancy should be operated upon. Prochownik's conclusion, obtained from an extensive trial of both conservative and operative procedures, that operation is the only proper treatment of extrauterine pregnancy, must be accepted generally.

Hematocele Retrouterina Caused by Hemorrhage from an Ovary.—GABRIEL (*Archiv. fuer Gynaek.*, vol. lxiv., 1901).—The author reviews the literature pertaining to this subject and reports one case of his own. Both tubes being involved, vaginal radical operation was performed. The right appendages presented the typical changes due to chronic gonorrhœa. The left tube was thickened, the left ovary of about the normal size. The latter showed a ruptured cavity of the size of a cherry, the walls of which were covered with a hemorrhagic crumbling mass. Microscopical examination reveals the cavity to be a ruptured Graafian follicle, in which no signs of tissue characteristic of pregnancy can be detected. Thus the possibility that it is a case of ovarian pregnancy is excluded.

The Indication for Artificial Abortion in the Treatment of Neuroses and Psychoses.—JOLLY (*Versamml. Deutscher Naturforscher*, Hamburg, 1901, *Ref. Cbl. fuer Gyn.*, 1901, No. 42).—Jolly believes that chorea gravidarum can be influenced favorably by an interruption of pregnancy. In all the cases in which this treatment was resorted to upon his advice, the outcome was satisfactory. The patients usually do not show marked improvement until one or two days after the fetus has been expelled. In cases of epilepsy artificial abortion is seldom indicated; more often in hystero-epilepsy and in melancholia; in the latter condition, however, a favorable outcome is very common without any interference with the pregnancy. Alteration in the circulation and metabolism during pregnancy play an important part in the pathogenesis of this condition. The continuous dread of the hardships of pregnancy and of the dangers of confinement has a detrimental effect. As a rule, we have to deal with neuropathic individuals, run down by continual fear and lack of sleep. Immediate interruption of pregnancy is indicated where transference of the patient to an insane asylum would seem to offer the only other security against suicide.

The Use of Sugar in Inertia of the Uterus During Labor.—M. LOP, Marseilles (*Gazette des Hopitaux*, October 17, 1901).—BOSSI, of Genoa, and PAYER, of Gratz, have lately reported the results of their researches on the efficacy of sugar in cases of inertia of the uterus. Lop, commenting upon these reports, calls attention to the fact that midwives in southern France since old times are in the habit of giving sugar to women in labor, if the expulsion of the child is delayed. The favorable effect of sugar upon the uterine contractions is so well known, that parturients in this part of the country will ask for "their sugar."

PEDIATRICS.

IN CHARGE OF

JOHN ZAHORSKY, M. D.

Infantile Scurvy and Marasmus.—HUBER (*Arch. Ped.*, November, 1901).—The patient was an infant thirteen months old. He was fed on the breast for a few months, and as he did not thrive the food was changed to condensed milk, and then to a mixture of cream and water. Gastro-enteritis developed.

On admission to the hospital the appearance was deplorable. Emaciation was extreme and prostration marked. Extensive black discoloration of the skin over the chest and abdomen was present. Smaller hemorrhagic spots were found scattered over the rest of the body. There were bed-sores over the sacrum and spinous processes. The right thigh and knee were swollen. Temperature, sub-normal; weight, eight pounds, one ounce. Blood examination: Red cells, u, 740,000; white, 6,700; hemoglobin, 46 per cent. Treatment: Orange juice, whiskey, water, boiled milk and barley water. Raw milk was refused. The milk was given in hourly drachm doses at first. Later meat juice, broths and eggs were added. The infant rapidly recovered.

Vaccination as a Therapeutic Measure in Whooping-Cough.—LAFRUSCIO (*Ibid.*; *Temeria Medica*, April 4, 1901).—The author says that children were vaccinated for the first time in one hundred and twenty-one cases, and revaccinated in thirty-one out of the one hundred and fifty-two cases of whooping-cough, complicated with bronchitis or pneumonia in many instances, which he had occasion to treat last year. He is convinced that vaccination solves the therapeutic problem of whooping-cough. Five typical cases are described in detail; in most of them pneumonia and the convulsions ceased as if by magic after the vaccination, and although the cough persisted for a few weeks in some cases, it was merely as an ordinary catarrhal cough.

The Clinical Bacteriology of Diphtheria.—SCHABAD (*Jahrb. f. Kinderh.*, October 1, 1901).—This is an exhaustive study of the subject of the clinical varieties of diphtheria bacilli. He arrives at the following conclusions:

1. Diphtheria bacilli and pseudo-diphtheria bacilli are two distinct varieties.
2. The difference between them is characterized by a difference in growth on various culture media, in morphology, in reaction of a bouillon culture, in the staining according to Neisser, and the pathogenesis to animals.
3. The most striking differences are the reaction of bouillon culture and the Neisser's stain.
4. Pseudo-diphtheria bacilli must be distinguished from avirulent diphtheria bacilli; the latter, with the exception of their avirulence, agree in all points with the true diphtheria bacilli.
5. The difference in the results obtained through the Neisser stain by various observers may be explained by mistaking the pseudo-diphtheria for the avirulent diphtheria bacillus.
6. Avirulent diphtheria bacilli can be differentiated from virulent bacilli in all cases by special culture characteristics.

The Effect of Diluents on Milk.—FRANKLINE WHITE (*Jour. Bos. Soc. Med. Sci.*; *Merck's Arch.*, October, 1901).—After experimenting on the effects of different diluents on the coagulation and digestion of milk, he finds that dilution of milk with cereal decoctions renders the casein curd much more fine than simple dilution with water. This is mainly due to the starch in solution. For practical use a solution of three-fourths of one per cent. is best. Diastase, by converting the

starch to dextrin and maltase, promptly lessens and removes the action of cereal waters upon casein. Its addition is not a practical measure when the action upon the curd is desired. Lime water is no better than simple water. Albumin water has no practical value as a diluent.

Tetanus Complicating Diphtheria.—POWERS (*Amer. Med.*, November 2, 1901).—The patient was a boy aged eleven years. His temperature was 103 degrees. He had trismus and opisthotonos. He gave a history of having run a nail in his foot six days previous. The wound was inflamed. Prescribed pilocarpine, chloral, and bromides. Eight days later the mouth could be opened sufficiently to inspect fauces. A pseudo-membrane was found on the tonsil. Cultures revealed the Klebs-Loeffler bacillus. The patient was given antitoxin. The writer believes that the tetanus infection was banished by the diphtheria.

Intubation of an Infant Seven Days Old.—BAILEY (*Ibid*), lays claim of having intubated the youngest child on record. The infant suffered from a laryngitis due to German measles (?) Laryngeal stenosis became dangerous. Intubation was performed and the tube left in two days. The infant was unable to swallow for two weeks and had to be fed through a tube. For six weeks his cry was not heard, but a perfect recovery was made.

Adenoma of both Adrenals in the Newborn, Associated with Retrogressive Changes in the Adrenals of Marchand.—WARTHIN (*Arch. Ped.*, November, 1901).—A very interesting case of adenoma of both adrenals is reported by Warthin. A male infant died on the fourth day with suppression of the urine and convulsive seizures. At the autopsy the left adrenal was found to be replaced by a tumor about the size of a hen's egg. In the apex of the right adrenal was a firm yellowish mass about the size of a cherry. On the right spermatic vein, just above the right internal ring, there was a small body, size of a mustard seed. Another small body was attached lower down. (Adrenal of Marchand.)

Microscopical examination of both adrenal tumors show a hyperplasia of the fascicular zone followed by marked fatty changes and necrosis. Acute parenchymatous degenerative nephritis was found in the kidneys and liver. The small bodies found on the spermatic veins were found to consist of adrenal tissue. These he designated adrenals of Marchand. Extensive fatty change was present throughout these small organs. The etiology of this condition is obscure, but, most likely, has a toxic origin.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

The Finer Pathological Changes in the Ammons Horn in Epileptics.—LUDWIG HAJAS (*Archiv für Psychiatrie und Nervenkrankheiten*, Vol. xxxiv., No. 2, p. 54.)—This study is based upon the careful microscopic study of the brains of four epileptics. The Nissl stain was used for the nerve-cells. In every case the rest of the central nervous system was carefully studied. As a result of this study the author notes the following: (1) One or both Ammons horn in every autopsy was smaller than normal and usually was found to be sclerotic. (2) Together with this change a rich new growth of blood vessels and a hypergliomatosis were found. (3) In several cell groups, especially in the pyramid cells, less often in the polygonal cells, complete disappearance of cells could be demonstrated. (4) In these

islands of cell disappearance, Glia cells are especially increased in number. (5) The hypergliomatosis was accompanied by a cell destruction. (6) Sclerosis of the cells. (7) Granular degeneration of the cells. (8) Serous condition of the cells.

The softening sometimes found in the Ammons horn in epilepsy the author holds to be less typical. The typical change in the Ammons horn in epilepsy is an inflammatory sclerosis which is shown by the condition of the blood vessels, by the neuroglia, and by the ependymitis and hydrocephalus internus which are found in most cases. This inflammatory encephalitic process is very gradual. Its result is the sclerotic atrophy to be seen both macro- and microscopically, which is comparable to the connective tissue atrophy found in other inflamed organs.

Reflex Epilepsy in a Case of Spastic Œsophageal Stenosis.—L. E. BREGMAN (*Neurologisches Centralblatt*, November 1, 1901).—Spastic Œsophageal stenosis is a rare condition. A. Schmidt could collect only twenty-four cases up to 1898. Reflex epilepsy as a complication has never been recorded before. This case is briefly as follows: Man, aged twenty-five years, no nervous heredity. The present condition has lasted ten years and consists in an inability to pass either liquid or solid food into the stomach. The food remains in the Œsophagus and can easily be removed from it by the patient. As a rule, he can force the food swallowed into his stomach by forced expiration or inspiration, together with efforts at swallowing. At times even this means fail, and for eight days at a time he has been unable to pass any food at all into his stomach. The Œsophageal stenosis shows great variation in this respect. During the last six or seven years attacks of unconsciousness have taken place during eating, which showed the following symptoms: tremor, restlessness, anxiety, paresthesia, darkness before the eyes, unconsciousness. There are no convulsive movements. The attacks last only a few seconds and are followed by headaches. The patient has injured himself frequently by falling. These attacks come on only when the patient attempts to press the food swallowed through the stenosis by the means above described. The passage of a bougie does not result in these symptoms. The author believes that the stenosis is functional and not organic, for these reasons: 1. Long duration of the disease, with preservation of a good state of nutrition. 2. The stenosis can be passed with even very thick bougies. 3. No history of any cause for an organic stenosis. The attacks are regarded as reflex epilepsy caused by the chronic irritation produced by the narrowed Œsophagus, for these reasons: 1. The seizures take place only during eating, when the patient is in the act of attempting to press the food through the narrowed Œsophageal tube. They are more severe in proportion as the obstruction becomes more difficult to overcome. 2. The attacks developed only after the local condition had existed for a long time. 3. There is no previous history or other etiological cause for epilepsy. The prognosis is not favorable. Treatment consists in the regular passage of bougies, lavage of the Œsophagus, tonics, etc. Rectal feeding continued for a long time, and an energetic course of bromides were tried.

Amebism of the Neurones.—BINET-SANGLE (*Le Progres Medical*, October 19, 1901).—This is a very interesting contribution to the theory of amoebic movements in the protoplasmic endings of the neurones. The author answers the objections which have been advanced by Lenhossek, Kolliker, Ramon Cajal, and Soury against it, and gives in addition the following reasons for the tenability of the theory: The retraction of the cellular bioproteon under the influence of various modes of motion has been observed in at least forty-three different species and in cells belonging to many and varied tissues. From this the author thinks he is justified in stating this law: The bioproteon of every living cell is susceptible of retraction under the influence of different modes of motion.

In answer to Jules Soury's chief objection, that it is essential to observe the movements of a neurone before believing that such movements exist, the author suggests that if this objection were allowed to have any influence, all methods of induction would have to be abandoned and psychology would be despaired of and it would be necessary to give up any hope of knowing anything about ourselves before death.

Acute Alcoholic Multiple Neuritis with Peculiar Changes in the Gasserian Ganglia.

—CHAS. W. BURR and D. J. MCCARTHY (*Phila. Med. Jour.*, November 2, 1901).—A case of acute alcoholic multiple neuritis in a woman thirty-seven years old, with involvement of the bladder and rectum and acute wide-spread degeneration of the central and peripheral nervous system, of the pelvic nerves and the vagus, with hemorrhagic extravasation within the sheath of the latter, degeneration of both fiber and cellular structures of the Gasserian ganglion and intra- and extracapsular round-cell infiltration and proliferation about the ganglion cells, which were in an advanced state of chromatolysis. The presence of bladder and rectal disturbances in a case of multiple neuritis is important, for it is commonly supposed that they do not occur, and that their existence is a differential diagnostic point against it.

Psychical Symptoms in Malaria.—CARDAMATIS (*Le Progres Medical*, September 28, 1901).—Among the psychical manifestations of malaria are, first, psychoneurotic symptoms during an attack of simple intermittent fever; second, the symptoms which are found in the chronic cases, both during the febrile attack and in the fever-free intervals; third, those found in the pernicious type of the disease; and fourth, the psychoses which occur in malarial cachexia. It is probable that the organism itself plays but a small part in the production of psychical symptoms, but the toxins originated by the organism are the active etiological factors. Although psychical symptoms may be found in any case of malaria, it is more apt to be present in those who are predisposed to neuropathic states. A morbid predisposition to neurasthenia, hysteria, and psychoses can be converted into an active condition by an attack of malaria. The malarial delirium differs in no way from the other toxic deliria. In the delirium of malaria, the patient, on account of the pathologic excitation of the centers of special sensation, develops a dreamy condition, and in that state delirium can be produced by hallucinations. There are four conditions of malarial intoxication: first, excitation; second, anesthesia; third, coma; fourth, paralysis. Attacks of acute mania are rare. In addition to the more common depressive and agitative forms of malarial psychoses, there is the same condition which is seen in other post-febrile mental conditions. The psychical symptoms produced in the course of a chronic malaria are not very frequent, while pathological mental states, which are said to follow an attack of malaria a long time after the malaria itself has been cured, are debatable, as far as their malarial origin is concerned.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

Case of Double Penis.—COLE (*American Medicine*, October 26, 1901) called attention to a case of double penis with imperforate anus previously reported by him. The anus was successfully operated upon. The boy was born with two penes and two urethrae. He passed urine through both organs at the same time. He is now in his eighth year, and still retains the two penes.

Some of the Conditions Following the Bottini Operation for Prostatic Obstruction.—BANGS (*N. Y. Med. Jour.*, July 27, 1901).—In some individuals, immediately after removing the Bottini incisor, it will be found impossible to introduce a soft rubber, gum or webbed catheter of any degree of stiffness. The deep muscles of the urethra contract down and prevent its passage even under an anæsthetic. To overcome this difficulty, the author has had made special steel catheters. This impediment usually subsides after three or four days. In one case, in which after the incision was made there was no bleeding, the cuts could be nicely seen with the cystoscope. The lateral lobes appeared to be divided in two and the cut seemed like a groove, the two halves falling away from each other, presenting the appearance of two separate smaller lobes. The inferior incision appeared as a dimple in a flat lobe. The patient had no discomfort after the operation; and while for some weeks there was a small amount of residual urine, after persistent treatment extending over a period of five months, it became infinitesimal and was of a sterile character. In another case in which the catheter at times caused so much irritation of the prostatic urethra that it was discarded at intervals and the condition allowed to shift for itself, the Bottini gave such relief that the catheter could be used without pain, and the patient could void entirely a measured quantity of fluid injected into the bladder and could urinate freely and easily even during an attack of pneumonia, of which he died two months later. At the autopsy the two lateral lobes were well widened out, and the inferior one was lowered. There was a little bridge of new tissue stretching across the inferior cut, which demonstrates the necessity of using the *catheter-a demeure*, or passing the sound after the operation and making applications of silver solution.

The improvement in urination is not only due to the groove made by the incision, but also to the cicatricial constriction and atrophy of the gland following. By the emptying of the bladder and electrical treatment its tone is much improved.

The author reports forty-two operations. Sixty per cent. have thrown away the catheter, twenty per cent. have increased amount of spontaneous urination, and twenty per cent. showed little or no improvement. Three deaths were attributed to the operation: two from sepsis, and one from shock.

Prostatectomy the Method of Choice in the Management of Prostatic Obstruction.—FULLER (*Jour. Amer. Med. Asso.*, November 2, 1901) regards a man under sixty-five years of age as young in connection with prostatic surgery, and as middle-aged between sixty-five and seventy-two. He has operated successfully upon a man of seventy-eight. A surgeon should be influenced by the age of a patient, his physical and mental condition. An arterio-fibro-sclerosis is decidedly unfavorable. Putrid urine and ascending pyelitis, with some involvement of the kidney, should not stand in the way of an operation, but should strengthen the plea for speedy relief from the obstruction.

For radical relief in the majority of cases the question resolves itself into prostatectomy or nothing, unless suprapubic fistula. In the minority of cases it may be proper to consider, in connection with prostatectomy, castration and the Bottini operation.

Prostatectomy is demanded in the following groups: 1. Those not amenable to urethral instrumentation. 2. Those demanding vesical or perineal drainage as well as relief from prostatic obstruction. 3. Those in which renal infection exists as a complication. 4. All those complicated by phosphatic calculi in which litholapaxy is impracticable. 5. Those in which the prostatic mass causing obstruction is such as to require direct removal, not being amenable to less radical surgical treatment. He thinks it very likely that the criticism that castration is now out of date is justifiable, but has seen well-authenticated cases in which it gave some relief.

The Bottini operation has one great recommendation: It is easy of accomplishment. That is its chief advantage over prostatectomy. The avoidance of cutting and the use of electricity makes it popular with many. Some surgeons consider the operation of not very grave import, while others regard it as a procedure of considerable surgical magnitude. The mortality is around ten per cent. The operation cannot be considered radical, as in most of the best results some and often much residual urine remains. The statistics of a new procedure cannot be relied upon. Those of castration in the beginning were even better than those now reported from the Bottini operation, but have not been verified by further reports.

Prostatectomy Versus Prostatotomy.—GUITERAS (*J. A. Med. Asso.*, November 2, 1901).—From statistics given, Guiteras estimates that the mortality of prostatectomy is three times as great as in prostatotomy, and the failures about as frequent; but the recoveries from the former are better than those from the latter. If a patient can empty his bladder of all his urine except five-tenths of an ounce, and his symptoms are relieved, the author considers the result first-class. It may be said in a general way that middle-aged men with very large prostates as felt through the rectum, having good kidneys and bladder, are cases for enucleation, while very old men with slightly damaged kidneys and prostates that do not feel very large on rectal examination, yet causing considerable urethral impediment, are cases for prostatotomy.

Perineal Prostatectomy.—SYMS (*J. A. Med. Asso.*, November 2, 1901) has devoted a good deal of effort and thought to prostatectomy, and has devised a modification of one of the principal methods, whereby he believes the operation has been much simplified and the mortality considerably lessened. The Bottini operation, first introduced twenty-five years ago and found wanting, and recently by some strongly advocated, does not appeal to the author as a sound surgical procedure. In the first place, it does not remove the hypertrophied prostate, and only partially the obstruction. In the second place, it leaves a slough to separate and come away through the urethra. As there is no other means of drainage, and the wound is in the presence of infected urine, it seems to the author that the method is not as safe as some of its advocates think it. He reports having no death in nine cases operated upon by prostatectomy, and a complete cure in all except one. He has felt that the high mortality of prostatectomy was due to the too extensive operative procedures employed, and that suprapubic cystotomy was a dangerous undertaking, to be avoided. The author has invented a bladder retractor by means of which the bladder and prostate can be pulled down into the perineum, so that the lobes can be reached and enucleated with the index finger.

This operation is done in the following manner: Through a perineal cut a dissection is made to the prostate. The membranous urethra is opened, through which the retractor, collapsed, is introduced well into the bladder. After inflating the bulb of the retractor with a known quantity of water, by means of it the prostate is pulled within reach of the finger in the perineum. The lobes are now separately perforated and enucleated with the index finger. A large perineal drainage tube through the perineal cut into the bladder and some gauze packed into the wound complete the operation. The patient is allowed to sit up in from seven to ten days. A steel sound is introduced every few days until healing is complete. The operation is not difficult to perform, neither is it formidable.

Prostatectomy should not be left as a last resort, but should be done before the patient is in a dying condition or not at all.

A Probable Cause of Failure in Internal Urethrotomy.—LYDSTON (*J. Cut. and G.-U. Dis.*, November, 1901).—It is a common occurrence with surgeons to

have a limited number of urethrotomies recontract in spite of the energy expended in cutting and keeping open the strictures. The author has been unable to classify his cases with a view to prognosis, and with due allowance for such conditions as gout, rheumatism, and syphilis, he has been in a quandary to explain operative failure. Recently he has arrived at the conclusion that the personal equation, or idiosyncrasy, has more to do with the results than is ordinarily supposed. With keloid, or pseudo-keloid, which in a general way is not a rare condition, and given a tendency to fibro-hyperplastic tissue growth, there is no logical reason why the urethra should be immune.

This constitutional tendency is probably a powerful factor in determining the recontraction, as well as the occurrence, extent, consistency, rigidity and resistance to dilatation of strictures.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

The Treatment of Cutaneous Epithelioma.—C. W. ALLEN, M. D., New York (*Med. Jour.*, November 9, 1901).—The author's plan of treatment comprises features of several methods. The border is to be curetted thoroughly with the smallest instrument which will do the work; this prepares the way for the quick action of the caustic. While the oozing of blood is being checked by pressure, the paste is prepared as follows: Equal parts by weight of arsenious acid and orthoform, or by bulk one part of white arsenic to two parts of orthoform; these are mixed with just enough water to form a paste the consistency of butter. The paste thus prepared is packed into the furrows made by the curette, seeing that it penetrates well beneath the skin at the periphery. The unless the lesion is much over an inch in diameter, the ulcer cavity is filled level with the skin; or, if there is no cavity, a thick layer of the paste is spread over the part to be destroyed; while in either case a thin layer is spread over lint or gauze, cutting a piece large enough to extend over the skin some distance beyond the sore; but before applying this outer layer of paste a ring half an inch wide should be painted with methylene blue solution to prevent irritation.

The reason for employing orthoform to replace the acacia of Marsden's paste is on account of its analgesic properties, relieving the pain to a large degree.

In deep-seated and penetrating cancers the author often uses the Czerny-Trunzek method.

The reasons given for using the paste in preference to the knife are as follows: "No matter how much care is taken, lymph spaces or channels must be cut through, and there is always a chance that the incision may not be sufficiently wide of the growth to avoid outlying foci. It is, as is well known, in the lymph channels that the epithelial proliferation takes place to a great extent. Now if, as is supposed, the products of inflammation set up by the arsenic are carried by way of the lymphatics to outlying regions, it seems a fair presumption that the treatment may be further reaching than the knife.

"In many instances the anatomical situation is such that it is practically impossible to go wide of the mark with a cutting instrument, and I am forced to the conclusion that satellitic foci have a much better chance of escaping the knife than of escaping the effects of arsenic properly applied."

The Removal of Superfluous Hair by a Combination of X-ray Exposure and Electrolysis.—DAVID WALSH, Edin. (*Lancet*, November 2, 1901).—Some time since

it occurred to the writer that a combination of the two methods of focus-tube exposure and electrolysis might be of advantage. He found the following method useful where the growth is not too thick: The exposure to the focus-tube is made in the ordinary way, and a week or ten days later, when the hair becomes loose, each hair is extracted and the electrolysis needle is passed into the follicle. This method means that a large number of electrolytic punctures must be made in a small area. However, with a little management the removal may be made to extend over a couple of days, and in that way it is possible to remove, so to speak, alternate hairs. Sometimes a second exposure to the focus-tube is needed before the hairs become loosened.

He finds this combined method useful in some cases, as it increases the chances of effectual cauterization of the emptied hair follicle. At the same time it shortens the period of depilation, but, like pure electrolysis, it should not be undertaken unless the patient has enough resolution and patience to undergo the requisite treatment.

On the Curability of Syphilis.—TARNOVSKY (*Arch. Russes de Pathologie de Médecine de Chirurgie et de Bactériologie*, 1900, vol. ix., No. 1, pp. 1-28; *La Presse Médicale*, September 7, 1901).—The author presents in this work fifty observations upon syphilitic patients, each of which he has observed from the beginning of the disease, afterwards observing them for twenty, thirty and forty years. In the majority of the cases the disease was contracted at the age of twenty-four, and twenty-eight and a half years have elapsed since the infection. The patients received during the first four years thorough treatment with mercury and iodide of potash. Most of these rested during twenty-four years under medical observation without presenting any manifestations of the disease. The majority enjoyed perfect health to the age of fifty-three years.

In only one were the symptoms limited to the initial lesion. In thirty-one cases the secondary accidents were traversed without ulterior symptoms. The remaining eighteen were cured after having suffered from gummata—that is the tertiary period.

Of the forty-eight men and two women forming the subject of these observations, twenty-seven married after contracting the syphilis. Of these twenty-nine six remained sterile, twenty-three of these had sixty-three infants, and of these sixty-three, fifty-six presented no trace of hereditary lues. All of these cases, with one exception, came from the upper classes and led the irregular life of a great city, some being military men, doctors, scientists, writers and functionaries, their work and manner of living being what is supposed to be opposed to the cure of syphilis. None of these cases were abusive in the use of alcohol. One had malaria. All enjoyed good health. Only three of the fifty would be supposed to have delicate health, yet two of these came from healthy and long-lived parentage.

After the disappearance of the secondary accidents the majority of the patients were submitted to treatment with iodide of potash following mercurial medication, and this was repeated intermittently for some years. In all of the cases the old methods of administering mercury were followed, but the author nevertheless thinks that even better results can be obtained by the newer modes of introducing the drug into the system.

The author states that syphilis is curable, but that the curability depends upon the treatment and the resistance of the patient to the morbid agent, good general health, and absence of morbid hereditary tendencies.

Infectious Erythema and Purpura Hæmorrhagica Secondary to a Membranous Enteritis in the Decline of Typhoid Fever.—P. LOUDE (*Annales de Derm. et Syph.*, August-September, 1901) reported before the Medical Society of the Hospital of Paris a case of typhoid fever in a man of twenty-three years which very nearly

aborted during the eleventh or twelfth day and was accompanied by a trifling angina. The disease became complicated by a membranous enteritis, in the course of which, seven days after the defervescence of the fever, there appeared a general eruption of macules, papules and petechiæ, after which ecchymoses occurred upon the buccal mucous membranes and gums, with hematuria and epistaxis, while the purpuric condition upon the skin became accentuated. In spite of the gravity of the general phenomena which accompanied the purpura, cure was effected, but was preceded by a lumbar zona.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

Incudectomy in the Treatment of Progressive Hardness of Hearing, Tinnitus and Aural Vertigo.—BURNETT (*Pennsylvania Medical Journal*, October, 1901) states that chronic progressive hardness of hearing is the result of a trophoneurosis in the muscular structure of the naso-pharynx, eustachian tube and tympanic cavity, and not a purely catarrhal process. He considers the catarrhal symptoms accompanying progressive hardness of hearing as the result, and not the cause, of the trophoneurotic hardness of hearing, as is proven by the fact that, even when the catarrhal affections of the middle ear and naso-pharynx are cured, the deafness, tinnitus and ear vertigo continue to grow worse. The trophoneurosis, in the correlated muscular structure of the naso-pharynx and middle ear, induces sclerosis in the muco-periosteal lining of the tympanic cavity, contraction of the tensor tympani and ossicles, impaction of the stapes in the oval window, ankylosis of these bonelets, and stiffening of the membrane of the round window.

A well-known characteristic of this aural trophoneurosis is that it appears in one ear first and then, sooner or later, manifests itself in the other.

Ear vertigo occurs most often in cases of chronic sclerotic otitis media. Usually only in one ear. the more affected, is the cause of vertigo, though both ears may be affected with so-called chronic catarrhal otitis media. The more affected ear—the one causing the vertigo—is always profoundly deaf, and may be the seat of distressing tinnitus. The attack of vertigo comes on suddenly, but is usually slight, and occurs at long intervals, but finally the intervals become shorter and the symptoms more aggravated. Nausea and vomiting may be very intense and may be followed by collapse, but without loss of consciousness. The fact that the patient does not lose consciousness from ear vertigo, serves as the great differential guide in diagnosis between it and apoplexy, with both of which it is often confounded.

When conditions in both ears are the cause of the ear vertigo, the patient is entirely unable to walk, and sits down whenever he is attacked, even in the street. Such cases are often mistaken for alcoholic intoxication.

The first dominant physical change in the drum-cavity in progressive hardness of hearing is the contraction of the tensor tympani muscle.

This undue contraction in the tensor of one drum membrane, is followed by a similar one in the opposite tympanum, apparently by cross-influence.

The aim should be to overcome this retractive power of the tensor tympani, and thus relieve the symptoms and arrest the advance of this progressive neurosis of the muscular structures of the middle ear. This may be done in several ways, viz.: Tenotomy of the tensor tympani—a very uncertain method; excision of the membrane and malleus—a procedure followed by inflammatory reaction and simple incudectomy. The latter method, though difficult to apply, is entirely harm-

less and efficient in its results. The operation is performed under general anaesthesia.

The canal is sterilized by a solution of formalin 1:1000, and illuminated, best by a portable electric light held on the forehead. The initial incision is made with a delicate knife just behind the short process of the malleus and following closely the periphery downwards and backwards until a point below a line drawn horizontally through the umbo is reached. Little or no bleeding follows. The flap so made should be pushed inwards by means of a probe armed with a dossil of sterilized cotton. The incus-stapes joint is now seen, and the incus should be gently disarticulated from the stapes by drawing the former outwards and downwards by means of an incus hook knife passed behind its long limb.

When this is done, the long limb of the incus should be grasped by special forceps and drawn very cautiously downward and outward into the auditory canal, and then removed from the ear.

The slight bleeding which sometimes follows needs no attention. The meatus should be stopped with sterilized gauze, and the ear let alone for twenty-four to forty-eight hours, unless the gauze gets moist with blood. Then a dry dressing is inserted. There is no after-treatment, and, as a rule, there is no reaction following the operation.

Mastoid Operations—Disaster from Waiting for Group Symptoms.—C. B. STOCKWELL (*Detroit Medical Journal*, October, 1901).—Too little importance is attached to single symptoms, and, while waiting for a combination or sequence of signs, death often ensues. If proper significance could be attached to one or two important symptoms, doubt would be cleared up and life saved in many cases.

As an illustration in point the following is given, viz.: a case of acute suppurative inflammation of the middle ear, coming on as a concomitant to an attack of la grippe. After a few weeks the gradually diminishing discharge ceased, but some *malaise*, deafness, and a temperature slightly above the normal remained. Within a day or two the patient walked to the physician's office in the morning. In the evening a violent headache arose on the affected side, followed by meningeal symptoms and death in forty-eight hours. Previous to these symptoms none of the following group symptoms were in evidence: pain in mastoid region, tenderness on pressure, hyperæmia and œdema of the soft parts covering the mastoid, prolapse of the upper posterior wall of the auditory canal in the neighborhood of the drum, abundant discharge of creamy pus through the opening in the drum, facial paresis or paralysis, extension of the inflammation to the soft parts below the mastoid, phlebitis of the mastoid emissary vein, brain symptoms, and septicæmia phenomenæ—these latter, however, suggested by *malaise* and slight fever.

Some hours after the fulminating attack, slight tenderness was detected below the apex of the mastoid. An operation six hours before death revealed a suppurative inflammation in the mastoid, and a thrombosis in the adjacent sinus.

Another illustration the author gives is the case of a man, aged sixty-nine, who, five or six days before, had slight attack of the grippe, followed by marked deafness in the right ear. There was, perhaps, some slight middle-ear inflammation; but there was never any perforation followed by pus, nor even bulging or redness of any point of the drum membrane. The symptoms for three weeks were: a small inflamed and sensitive area in the posterior wall of the canal, near the outer part of the osseous portion, attended with a varying amount of pain, some pain over the parietal region of the corresponding side at night, marked deafness, no fever, no chills, no pain, no tenderness or swelling over the mastoid region, no bulging of the posterior upper wall of the external meatus near the drum, and no discharge from the ear. Treatment did not improve the deafness. Operation was advised, but consent was not given until ten days later, after a slight chill and slight rise in temperature. An abscess was found

in the mastoid, adjacent to the inflamed area in the external meatus. In two weeks hearing was restored and the wound virtually healed.

The author concludes that the authorities should encourage earlier operations, and justify them in the light of fewer symptoms, as many typical mastoid cases are listed under obscure brain lesions, and go on to a fatal issue unrecognized and neglected.

Advances in the Treatment of Diseases of the Nose.—LAMBERT LACK (*Lancet*, November 2, 1901) notes some of the great advances made within recent years—for example, the subject that more than any other occupies the modern rhinologist, that of the diseases of the accessory sinuses and air-cells, is not mentioned in Morrell Mackenzie's work on "Diseases of the Nose."

Suppuration of the antri with no external signs is extremely common, and was first discovered by Zien (himself the victim of a fetid discharge from the nose), who divined the cause, and had his antrum opened and was cured. Being then on the lookout, he soon discovered that the disease was not infrequent; and more recently it has been found that suppuration in the frontal and other sinuses is not at all uncommon.

While antral suppuration is at times due to the teeth, it is more commonly caused by nasal catarrhs, especially those associated with infectious fevers and influenza.

An acute catarrh of a sinus is commonly associated with a nasal catarrh, and then if the outlet of the sinus becomes blocked, acute suppuration will result.

The majority of these acute cases get well spontaneously, but sometimes chronic suppuration results.

This may be due to several causes. The intensity of the original inflammation may irretrievably damage the mucous membrane lining the sinus; there may be an obstruction to the outlet of the sinus from thickening of the mucous membrane or bone, or from polypi, preventing a free escape of discharge, and ultimately the persistence of the suppuration may induce changes in the lining membrane or bony walls of the sinus. It is important that these cases should be recognized and treated, because if suppuration persists, secondary changes will occur.

The chief object of treatment is to reduce the swelling around the opening of the cavity and to allow free escape into the nose. The nose should be washed out with some alkaline solution, around the openings of the cavities suprarenal extract and cocaine should be applied on pledget of cotton, and allowed to remain twenty to thirty minutes.

Subsequently use five per cent. to ten per cent. menthol in almond oil or alkaline, to keep the passage clear. It may be necessary to puncture the antrum through the inferior meatus, or open through the socket of a carious tooth. Irrigation should then be resorted to daily.

Chronic suppuration requires surgical procedure. The treatment of polypi, and the destruction of the underlying bone in cases due to diseased bone, although advocated years ago, is only now becoming universally appreciated.

Trigeminal neuralgia, hay-fever, paroxysmal rhinorrhea and asthma frequently depend upon diseases or abnormalities of the nasal cavities, and the more modern thorough treatment of these is followed by gratifying results; and lastly, adenoids in children are now more generally diagnosed and surgically removed.

Three Obstinate Cases of Empyema of the Maxillary Antrum Cured with Injections of Nargol.—A. G. WIPPERN (*Medical News*, November 9th) reports the results he has had in the treatment of three obstinate cases of empyema of the maxillary antrum with nargol.

CASE I.—Was of six years' standing. The antrum had been opened through the alveolar process, and after five years' treatment, during which the patient wore a canula, there was no improvement in the condition.

He complained of trifacial neuralgia and asthma, both of which distressed him to an extreme degree. Last June the antrum was opened by way of the canine fossa, and, after curetting the cavity, it was packed with gauze. For a month the cavity was irrigated with solutions of boric acid, hydrozone and permanganate of potassium, with little benefit. A 0.25 per cent. silver nitrate solution was then injected three times weekly for two weeks, with some improvement.

He then began to use a 0.25 per cent. solution of nargol, one quart of which was injected three times weekly. After three months' treatment the patient was discharged as cured.

CASE II.—Woman, aged forty-three years; had influenza three years ago, since when she has had neuralgia. There was a muco-purulent secretion from naso-pharynx, which was in all probability carried into the stomach during sleep, and to which the patient's impaired health was due. At times she was conscious of a faint odor in the nose, and also suffered with toothache. A number of teeth had been extracted without benefit.

The antrum was opened through the canine fossa, and with a curette a large amount of granulation tissue was removed. The antrum was packed with gauze, and two days later the cavity washed out and repacked. This was done three times weekly for a month, when it was found that the mucous membrane was again thickened, that a second curettage was necessary.

The cavity was now flushed out three times weekly with a 0.25 per cent. solution of nargol, and after the lapse of four months there were no symptoms of the former condition, and the patient was considered cured.

CASE III.—Was of two years' standing, and had been irrigated three or four times weekly with a saturated solution of boric acid without much benefit. The patient was troubled with more or less muco-purulent discharge and neuralgia. The antrum was opened through the canine fossa, and the cavity packed with iodoform gauze. Three days later the daily injection of one pint of 0.25 per cent. nargol solution was begun, and continued for one week, when they were given three times weekly. After two months' treatment the patient was cured.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

Treatment of Hypopyon Ulcers of the Cornea.—R. J. HAMILTON (*Brit. Med. Jour.*, October 26, 1901).—To decrease hyperemia of the iris and ciliary congestion, Hamilton recommends early subconjunctival division (peritomy) of the episcleral branches of the anterior ciliary vessels. The actual cautery, repeated if necessary at the end of forty-eight hours, is of the greatest value in relieving pain and bringing the infective process to a stand-still. After cauterization, an ointment of iodoform, ten per cent., in castor oil and lanolin, is placed in the conjunctival sack, and the eye protected by a light bandage. In children, ulceration of the naso-pharynx, and in old people purulent dacryocystitis, are usually present, and should receive appropriate treatment.

Remarks on the Treatment of Ulcers of the Cornea with Hypopyon.—R. WILLIAMS (*Brit. Med. Jour.*, October 26, 1901).—Before the pus in the anterior chamber becomes fibrinous, a solution of quinine and atropia (four grains of quinine to one ounce of atropia sol.) is used every three hours, and a bandage

applied. Usually the hypopyon disappears in three or four days, and the ulcer goes on to healing. If, however, the hypopyon increases, the pus is evacuated in the following manner: "Taking a perpendicular line across the cornea through the center of the pupil, a Graefe-knife is inserted at its lower end, just behind the sclero-corneal margin, the edge of the knife looking forward and being at right angles to the corneal surface. It is then thrust into the anterior chamber *through* the hypopyon until the point is near the lower end of the pupil, and made to cut its way out rather rapidly through the cornea."

The aqueous escapes with a rush, carrying with it the contents of the anterior chamber. If the hypopyon mass sticks in the incision, it may be removed by forceps. In the majority of cases the incision heals by first intention, and there is no further accumulation of pus.

Advantages claimed are: (1) complete evacuation of the anterior chamber and union by first intention; (2) the impossibility of producing prolapse of the iris. After evacuation the edges of the incision come immediately to apposition, thus preventing incarceration of the iris.

The Use of Ethyl Chloride as a General Anesthetic in Ophthalmic Practice.—C. FROMAGET (*Ann. d'oculistique*, September, 1901).—In 1895 Carlson, a dentist, while spraying a gum with ethyl chloride, accidentally induced a general narcosis. Since then the drug has obtained wide acceptance as a general anesthetic in dentistry.

Fromaget has used ethyl chloride anesthesia in more than a hundred ophthalmic cases. His method is as follows: A handkerchief covered by a sheet of paper is shaped to a cone, in the bottom of which is placed a tampon of absorbent cotton; 2 c.c.—5 c.c. ethyl chloride is sprinkled on the cotton, and the cone held over the mouth and nose of the patient, the latter being incumbent, with clothing about the chest loosened.

Anesthesia ensues in from fifteen to forty-five seconds, and precedes muscular relaxation and abolition of the corneal reflex; it lasts from one to three minutes, but may be prolonged to fifteen minutes by renewals of the drug. Pulse regular, a little accelerated. No cyanosis. On withdrawal the patient recovers quickly, without depression or headache. Anesthesia may be induced on a full stomach without danger, as vomiting is rare and transient. A mild stage of excitement is sometimes observed in hysterical subjects. Dilation of the pupil indicates an overdose.

The writer insists that this method should not be regarded as a substitute for local anesthesia by cocain, which is pre-eminently indicated when the ocular tissues are not inflamed. Where cocain is ineffective, ethyl chloride is to be preferred to chloroform in operations of short duration.

This method is especially indicated in sclerotomy, iridectomy in acute glaucoma, paracentesis, and subconjunctival injections in suppurative keratitis. In tenotomies in children the patient may be allowed to recover, observation of the effect of the operation made, a fresh narcosis induced, and the operation completed.

On the Comparative Value of the Various Preparations of Silver in Ophthalmic Work.—HARTRIDGE (*Brit. Med. Jour.*, November 2, 1901).—The disadvantages and limitations of nitrate of silver are summed up by Hartridge as follows:

1. Great pain and irritation.
2. Strong caustic effect.
3. Long-continued use produces argyrosis.
4. The action of the drug is superficial, owing to the ready manner in which it is precipitated by albumen and chlorides. These drawbacks have induced the manufacturing chemist to endeavor to supply a silver compound which may be

as efficacious as the nitrate, while free from its disadvantages. The preparations alluded to are as follows:

ACTOL.—*Argentum lactas*, soluble in water 1:15. It is very irritating to the conjunctiva.

ITROL.—*Argentum citras*, soluble in water 1:4000. Non-irritating, penetrating, antiseptic. Applied also as a powder directly to the conjunctiva. Recommended in suppurative conditions of the conjunctiva, cornea and lachrymal apparatus.

ARGONINE.—*Argentum casein*, contains four per cent. silver. Soluble in warm water, forming an opalescent solution. Inferior to LARGIN and PROTARGOL.

ARGENTAMINE.—Contains only 2.6 per cent. of silver. In five per cent. solution it is non-irritating and penetrating.

NARGOL.—Compound of silver and nucleic acid, contains ten per cent. silver. Soluble in water and stable. Five per cent. and ten per cent. solutions cause no pain. Efficacious in acute contagious ophthalmia and suppurative dacryocystitis. It possesses most of the properties of PROTARGOL, and is less sticky.

LARGIN.—Compound of silver and protalbin, contains 11.8 per cent. silver. Soluble in water 1:10. Must be protected from light, and be freshly prepared. A saturated solution produces transient pain and irritation. It has been found of particular efficacy in acute contagious conjunctivitis due to the Weeks' bacillus, trachoma, and lachrymal cases.

PROTARGOL.—Is a molecular compound of silver with vegetable albumen. It contains 8.3 per cent. silver. Readily soluble in water; becomes dark-colored and sticky if not protected from the light. A ten per cent. solution is equivalent in germicidal power to a two per cent. silver nitrate solution, but it has much greater penetrating power. It has no caustic action, and causes no pain. Ten, twenty, thirty and even fifty per cent. solutions are recommended. Corneal involvement is no bar to its use. It has proved of great value to purulent conjunctivitis, acute contagious conjunctivitis, trachoma, and suppurative conditions of the lachrymal apparatus.

BOOK REVIEWS.

ATLAS AND EPITOME OF THE NERVOUS SYSTEM AND ITS DISEASES. By PROF. DR. CHR. JAKOB, of Erlangen. From the Second Revised German Edition. Edited by EDWARD D. FISHER, M. D., Professor of Diseases of the Nervous System, University and Bellevue Medical College, New York. With 83 plates and copious text. Philadelphia and London: W. B. Saunders & Co. 1901. Cloth, \$3.50, net.

This atlas from the second German edition of the well-known Lehman series is a model in every way. The plates are well selected, and some are extraordinarily realistic. Some of them are purely diagrammatic and are valuable because they present in a simple way the subject-matter treated of in the text. The text itself is clear and precise and brings clearly out the points which the diagram or plate illustrates. No atlas on neurology can compare to this, and it is doubtful whether any other author could devise one which brings within such a brief compass so much that is important and necessary for the student to know. The importance given to the anatomy and pathology of the central nervous system in this atlas will be much appreciated by those who are treating this subject, and the student himself will find that his way to the understanding of neurology will be made easier and pleasanter by a study of this admirable little volume.

CHURCH AND PETERSON'S NERVOUS AND MENTAL DISEASES. Third Edition. 1901. By ARCHIBALD CHURCH, M. D., Professor of Nervous and Mental Diseases, and Head of the Neurological Department, Northwestern University Medical School, Chicago; and FREDERICK PETERSON, M. D., Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York. Handsome octavo volume of 843 pages, profusely illustrated. Philadelphia and London: W. B. Saunders & Co. 1901. Cloth, \$5.00, net; Sheep or Half Morocco, \$6.00, net.

That this treatise has gone through three editions is ample proof of its popularity and of its value to the general practitioner and student. The chief criticism which might be advanced is that too little attention has been paid to the anatomical and pathological side of the subjects treated. Nowhere else in medicine perhaps is there such a need for emphasis to be placed upon the anatomical and pathological data as in nervous diseases, and the evident lack of this is a serious failing of the book. The illustrations are in the main well selected, though rather too great emphasis is placed upon rare conditions, which will seldom be met with by the general practitioner and student, for whose use the book is primarily intended. The nervous section is better than the mental. The latter is much in the style of the usual English text-book on this subject, which attempts to simplify a complex division of medicine by descriptions of symptoms rather than by careful clinical histories of the cases. A long account of a paranoiac, together with his autobiography, is a questionable addition to the book, for the reason that the student will be led to believe from the great amount of space given to this subject that it is of greatest importance, whereas other topics, to which much less space is given, are by far more essential to the general practitioner. The book, on the whole, has considerable value, chiefly in the fact that in one volume the student can find a fair treatment of both neurology and psychiatry, and thus may be impressed with their close connection. The make-up of the book is good, the print and paper excellent, and the few illustrations well done.

HAND ATLAS OF HUMAN ANATOMY. By WERNER SPALTEHOLZ, Professor of Anatomy in the University of Leipsic. Translated from the third German Edition by LEWELLYS F. BARKER, Professor of Anatomy in the University of Chicago. With a preface by FRANKLIN P. MALL, Professor of Anatomy in the Johns Hopkins University at Baltimore. Publishers, S. Hirzel, Leipsic; G. E. Stechert, 9 E. 16th st., New York. Vol. I. and II. Price: Each volume in cloth, \$3.50:

The enthusiastic acknowledgment which the original German edition of this atlas was met with is best proven by the fact that at the time of publication of the second volume, the first had already appeared in its second edition. In this country the work was introduced and popularized by Franklin P. Mall, of Johns Hopkins. We feel obliged to Dr. L. F. Barker of the University of Chicago for preparing a translation of this excellent book, thus enabling students and physicians who do not read German to be benefited by its study. Two of the volumes have been published in the English language at the time of writing, and the third one is promised soon. The first part deals with bones, joints and ligaments; the second with regions, muscles, fasciæ, heart and blood vessels. These two volumes contain 511 drawings, which we cannot praise too highly for their beauty and exactness. A short text is furnished by a most clear description of the figures and an explanation of all the descriptive terms made use of in the figures. In the author's opinion the text should only be a guide to the student, and ought in no way to render the study of a text-book of anatomy unnecessary. There is no question that this work is the best atlas of anatomy which has ever been published. It will prove of value to all who are interested in anatomy, and of unusual pleasure to those who will limit themselves to a cursory survey of the excellent illustrations.

A TEXT-BOOK OF DISEASES OF WOMEN. By CHARLES B. PENROSE, M. D., Ph. D., formerly Professor of Gynecology in the University of Pennsylvania. Fourth edition; revised. Octavo volume of 539 pages, handsomely illustrated. Philadelphia and London: W. B. Saunders & Co. 1901. Cloth, \$3.75, net.

The author presents in this book the best teachings of modern gynecology. In the idea of writing a book for students he tries to avoid confusion by limiting himself to an exhibition of his personal views on several still undecided questions. He fulfills this aim with noteworthy modesty. He never endeavors to convince the reader that his views are the only legitimate ones. This circumstance renders the reading of this work more interesting to every one. It is a *resume* of the wide personal experience of the author in the field of gynecology, and, therefore, we may be allowed to express our regret in this place that he withholds his views on the prognosis of cancer. We believe that no other American text-book deals with the question of the rationale and use of pessaries in as clear and complete a way. Tuberculosis of the genital organs and drainage, questions to which but little attention is paid in many of the text-books, are given considerable space.

This new edition has been carefully revised, much new matter has been added, and a number of new illustrations have been introduced.

LIBERTINISM AND MARRIAGE. By DR. LOUIS JULLIEN (Paris), Surgeon of Saint-Lazare Prison; Laureate of the Institute, of the Academy of Medicine, and of the Faculty of Medicine of Paris. Translated by R. B. DOUGLAS. Size of page $5\frac{1}{2} \times 7\frac{1}{2}$ inches. Pages v-169. Extra cloth, \$1.00, net, delivered. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry street.

If we are not mistaken, the German translation of this book, the original of which is written in French, bears the more appropriate title, "Gonorrhea and

Marriage." This theme is dealt with in this work in a most elaborate way. In the author's opinion, in the majority of cases the woman is the victim, and he hopes that "his view will be favorably appreciated in the United States, where the respect shown to womankind is boundless, so to speak." Although a strictly scientific work, it is written in the characteristic light French style, here and there bringing as illustrations the short histories of remarkable and very interesting cases. We believe that this little book will make many friends among physicians, and we hope that it will considerably promote the right understanding of the importance and consequence of gonorrhœa to the marital state.

ESSENTIALS OF OBSTETRICS. By CHARLES JEWETT, A. M., M. D., Sc. D., Professor of Obstetrics and Gynecology in the Long Island College Hospital, and Obstetrician and Gynecologist to the Hospital, etc. New (second) edition, revised and enlarged. In one 12mo volume of 376 pages, with 80 engravings and 5 colored plates. Cloth, \$2.25, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

The object of this work is to place essential facts and principles of obstetrics within easy grasp of the student. It is intended as an introduction to the more elaborate treatise, and as a guide in following the didactic and the practical teaching of the college course. The present edition represents a complete revision. The book deserves favorable comment and we heartily recommend it to the students.

A TEXT-BOOK OF OBSTETRICS. By BARTON COOKE HIRST, M. D., Professor of Obstetrics in the University of Pennsylvania. Third edition, thoroughly revised and enlarged. Royal octavo, 873 pages, with 704 illustrations, many of them in colors. Philadelphia and London: W. B. Saunders & Co. 1901. Cloth, \$5.00, net.

This well-known book has just appeared in its third thoroughly revised and enlarged edition. The reader is impressed in every chapter with the fact that it is written as the outcome of a large practical experience. The author's advice in regard to the care for the puerpera is deserving of special consideration. We cannot agree, however, that the administration of ergot is advisable in every case, as soon as the child is born. We limit its use to cases in which an indication is given, and that does not happen very often. Figure 433 ought to be replaced by a better one. Packing of the puerperal uterus cannot be done satisfactorily without introducing the hand into the vagina, and, if possible, partly into the uterus. And if during this procedure the fundus uteri is not pressed down by an assistant or with the other hand, the packing will be insufficient and the vagina in great danger of being torn apart. For students and physicians alike this will be found one of the most satisfactory books on the subject of obstetrics.

MODERN OBSTETRICS: GENERAL AND OPERATIVE. By W. A. NEWMAN DORLAND, A. M., M. D., Assistant Demonstrator of Obstetrics, University of Pennsylvania; Associate in Gynecology, Philadelphia Polyclinic. Second edition, rewritten and greatly enlarged. Handsome octavo, 797 pages, with 201 illustrations. Philadelphia and London: W. B. Saunders & Co. 1901. Cloth, \$4.00, net.

The only characteristic features of this book are numerous tables which contain the various symptoms of two or three different pathologic conditions, ar-

ranged so as to facilitate the differential diagnosis. In all other respects the book is worked up along the usual line of text-books of obstetrics. We cannot say that this book is in any respect more "modern" than the last editions of a great number of works on obstetrics. The text is elucidated by numerous illustrations, many of which are well-known, from Hirst's "Obstetrics."

OPERATIVE SURGERY. Vol. II. Illustrated. By JOSEPH D. BRYANT, Published by D. Appleton & Co., New York. Price, \$5.00.

This volume comprises chapters xiii to xviii, treating in chapter xiii of operations on the mouth, pharynx, nose and esophagus; in chapter xiv, of operations on viscera connected with the peritoneum; in chapter xv, of operations on the anus and rectum; in chapter xvi, of operations on the thorax and neck; in chapter xvii, of operations on the urinary bladder; in chapter xviii, of operations on the scrotum, penis, and miscellaneous operations.

Each chapter is concisely and pointedly written, the author wasting no words; at the same time the style is pleasing. The author takes up the various organs and parts severally, and, after calling attention to its anatomical points and peculiarities, describes completely every operation connected with it. At the end of each description he discusses fully the leading modifications and methods of different operations. There are 827 illustrations in the 724 pages of reading matter. They are exceptionally fine and should alone recommend the book, which is up-to-date and first-class in every way.

INFANT FEEDING IN ITS RELATION TO HEALTH AND DISEASE. By LOUIS FISCHER, M. D., Visiting Physician to the Willard Parker and Reception Hospitals of New York City, etc. Containing 52 illustrations, with 23 charts and tables, mostly original. Second edition. Philadelphia: F. A. Davis Company, Publishers. 1901.

The book has undergone a careful revision and has been somewhat enlarged. Improvements in some of the chapters are manifest. Many valuable tables and references are found in the book. The subject of breast-feeding is carefully considered. He does not regard laboratory milk as the best diet for children. He seems to make the mistake of others who regard this as a special milk. Laboratory milk depends entirely on the physician's prescription. The assertion that sugar is added to make cow's milk palatable is taking a superficial view of the matter. Sugar is added to supply the deficiency of carbohydrates. We do not agree that an excess of sugar is the usual source of colic and green stools. His advocacy of the Gaertner milk will not meet the views of the practical physician, as a similar and more accurate mixture can be supplied by simple home modification. We are glad to see a chapter on the feeding of infants suffering from summer complaint, but it is very incomplete.

INTERSTATE MEDICAL JOURNAL.

TABLE OF CONTENTS.

ORIGINAL ARTICLES.

	PAGE.
Penetrating Wounds of the Heart with Suturing of the Wounds—Report of a Case. By H. L. Nietert, M. D., of St. Louis, Mo. (Illustrated.).....	563
Some Facts About Tetanus-Antitoxin. By C. Fisch, M. D., of St. Louis, Mo.....	571
An Historical Resume of the Procedures Intended for the Repair of Cleft-Palate, with Mention of a Case. By Willard Bartlett, A. M., M. D., of St. Louis, Mo. (Illustrated.).....	575
A Case of Nephrotomy, with Drainage for Tuberculosis of the Right Ureter—Secondary Nephrectomy—Apparent Cure. By H. McC. Johnson, M. D., of St. Louis, Mo.....	580

EDITORIAL COMMENT.

Consumption Legislation.....	582
The Cause of the Hemostatic Action of Gelatin.....	584
X-Rays in Dermato-Therapy.....	584
The Outbreak of Tetanus in Camden, New Jersey.....	585
A New Thought on the Treatment of Carcinoma.....	586
The Question of Milk Sugar or Cane Sugar.....	587

MEDICAL AND SURGICAL PROGRESS.

Internal Medicine.....	588	Neurology.....	607
Surgery.....	592	Genito-Urinary Surgery.....	609
Therapeutics.....	597	Dermatology and Syphilis.....	612
Pathology and Bacteriology.....	600	Laryngology and Otology.....	614
Gynecology and Obstetrics.....	603	Ophthalmology.....	617
Pediatrics.....	606		

BOOK REVIEWS.....	620
-------------------	-----

INTERSTATE MEDICAL JOURNAL

Published on the Fifteenth Day of Every Month by the
INTERSTATE MEDICAL JOURNAL COMPANY

W. B. OUTTEN, M. D., President.

O. F. BALL, M. D., Secretary.

SUBSCRIPTION, \$2.00.

FOREIGN SUBSCRIPTION, \$2.50.

SINGLE COPY, 25c.

Subscriptions may begin at any time. Volumes end with issues of December.

Original Articles.—Articles are accepted for publication with the understanding that they are contributed solely to this journal. French and German articles will be received and translated free of charge, if found desirable for publication.

Reprints (200) of original articles will be furnished gratis to authors making the request, which must accompany the manuscript. Covers to these, and extra reprints, will be furnished at net cost.

Illustrations, such as plates, half-tones and zinc etchings, as in the judgment of the editors are necessary to illustrate articles, will be furnished when photographs or drawings are supplied by the author.

Rejected Manuscripts will be returned, if stamps be sent for this purpose.

Advertisements.—Advertising forms go to press on the 5th of the month, the JOURNAL being mailed on the 15th. Time should be allowed for composition of advertisements and

for the sending and return of proofs. Advertising rates will be sent on application.

Change of Address.—In ordering a change of address, it is important that both the old and new addresses be given.

Discontinuances.—The INTERSTATE MEDICAL JOURNAL is not discontinued at expiration of subscription, but is sent until an explicit order to stop is received or a notice sent by us. A large majority of our subscribers prefer not to have subscriptions interrupted and files broken in case they fail to remit before expiration. It is therefore assumed, unless notice to discontinue is received and the amount of back subscription paid to date, that the subscriber wishes no interruption in his series. Journals returned are not notice of discontinuance.

Remittances should be made by check, draft, registered letter, money or express order. Address all communications to INTERSTATE MEDICAL JOURNAL, Commercial Building, St. Louis, Mo.

Please mention INTERSTATE MEDICAL JOURNAL in writing to advertisers.

INTERSTATE MEDICAL JOURNAL

INDEX TO VOLUME VIII.

JANUARY—DECEMBER, 1901.

	PAGE.		PAGE.
A Case of Nephrotomy, with Drainage for Tuberculosis of the Right Ureter—Secondary Nephrectomy—Apparent Cure.....	580	Carcinosis of the Internal Genital Organs in the Female.....	511
Alcohol, Obscure Injuries of Toxic Use of.....	473	Carcinoma, A New Thought on the Treatment of.....	586
Anchylostomiasis.....	94	Chemistry of the Bacillus Tuberculosis.....	354
Anemia.....	258	Children, Diabetes in.....	85
Anesthesia, New Chloroform-Oxygen	459	Children Practice, the Status of....	45
A New Thought on the Treatment of Carcinoma.....	586	Children, The Nephritides of.....	9
ANGEAR, J. M., Article by.....	143	CHARLES, J. W., Article by.....	527
An Historical Resume of the Procedures Intended for the Repair of Cleft-Palate, with Mention of a Case.....	575	Chloroform Narcosis, Resuscitation from Collapse in.....	297
Antiperistalsis, An Experimental Study of.....	299	Chloroform-Oxygen Anesthesia, New	459
Antitoxin, Tetanus-Infected.....	533	Choledochotomy, A Case of.....	91
Appendicitis.....	82	Chorea and its Treatment.....	48
Appendicitis and Typhoid Fever, Differential Diagnosis.....	409	CIPRIANI, A. G., Article by.....	308
Bacillus, A Typhoid-Like.....	404	Classification of Intestinal Bacteria.	457
Bacillus Aërogenes Capsulatus.....	355	Cleft-Palate, An Historical Resume of the Procedures Intended for Repair of, with Mention of a Case	575
Bacillus, Influenza.....	7	CLOPTON, M. B., Article by.....	527
Bacillus, Pyocyaneus.....	373	Colon Bacillus as an Index of Sewage Pollution.....	359
Bacillus, Diphtheria, Staining of..	173	Compulsory Study of the Special Branches.....	531
Bacillus Tuberculosis, Chemistry of	354	Concentration in Scientific Work..	231
Bacillus Typhosus in Water.....	173	Consent, Extending an Operation Without.....	292
Bacteria, Classification of Intestinal	457	Consumptive Legislation.....	582
Bacteria, Gas-Producing.....	42	CORDIER, A. H., Article by.....	519
BALL, JAMES MOORES, Article by...	57	Country Doctor, The.....	3
BARNES, ALGERNON S., Jr., Article by.....	58	CROTHERS, T. D., Article by.....	473
BARTLETT, WILLARD, Article by...	575	Curious Cases of Auto-Sectio Cæsarea.....	230
BATE, R. ALEXANDER, Article by...	17	Czar's Illness, The.....	7
Birth-Rate Lowering in France....	88	Dawn of the Twentieth Century, At the.....	2
Blood Staining, New Method of....	173	Death of Ollivier.....	5
BOODY, GEORGE, Article by.....	243	Decrease of Death-Rate in the Nineteenth Century.....	8
Bread, Our Daily.....	193	Dermato-Therapy, X-Rays in.....	584
BROWER, DANIEL R., Article by....	131	Diabetes Mellitus, Changes in the Pancreas in.....	405
BROWN, SANGER, Article by.....	411	Diabetes Mellitus, Etiology and Treatment of.....	145
Cancer, Statistics of.....	293		
Cancer, The Parasite of.....	229		

	PAGE.		PAGE.
Differential Diagnosis Between Typhoid Fever and Appendicitis....	409	GRAMM, CARL THEODOR, Article by..	305
Director, Medical, of the World's Fair	357	GREEN, JOHN JR., Article by.....	365
Diseases of the Pancreas.....	126	Head-Knocking in Rachitic Children	130
Dislocation of the Head of the Humerus, A Case of.....	61	Heart, Penetrating Wounds of the, with Suturing of the Wounds—Report of a Case.....	563
Distoma Spathula Hepatis.....	45	Heated Term, The.....	170
Doctresses of Medicine, The.....	97	Hemorrhagica Purpura, New Etiology of.....	89
Dropsy, Hydragogin in.....	311	Hemostatic Action of Gelatin, The Cause of the.....	584
Dwarfs, About.....	21	HOFFMAN, CHARLES, Article by....	258
DYER, J. H., Article by.....	94	HOMAN, GEORGE, Article by.....	193
Eclampsia, The Treatment of.....	232	Home Treatment of Tuberculosis... 357	
Eczema, The Parasitic Nature of... 126		Hospital Horrors at Bellevue.....	8
Edict, Koch's.....	358	Hospital, Missouri General.....	41
Editorial Staff, Increase in.....	455	HUGHES, JAMES G., Article by.....	104
Electricity in Gynecologic Practice. 253		Humerus, Dislocation of the Head of the.....	61
Elixir of Life, The.....	5	Hydragogin in Dropsy.....	311
ENGMAN, M. F., Articles by.. 373, 429		Il-Litterateur in Medicine, The 129	
Epidemic Parotiditis.....	130	Illusions of Pathology, Another Chapter on.....	406
Erosions of the Stomach.....	367	Increase of Our Editorial Staff.....	455
Enteritis of Breast-Fed Infants, Staphylococci.....	456	Increase of Cancer in Massachusetts 353	
Etiology and Treatment of Diabetes Mellitus	145	Infant, Pemphigus Vegetans in an . 356	
Etiology of Purpura Hemorrhagica.. 89		Inflammatory Condition of the Skin, with Green Scales.....	373
Evil, Problem of.....	124	Influenza, Bacillus of.....	7
Experimental Study of Antiperistalsis	299	Influenza, Observations on.....	58
Eyes of Our School-Children, The.. 183		Injuries, Toxic, Following the Use of Alcohol.....	473
FALLER, ALBERT, Article by.....	429	Insanity in Bank Officials and Bank Failures	407
Filters Supplied to the Troops in South Africa.....	408	Insulation Complicated by a Lobar Pneumonia	426
FISCH, C., Article by.....	571	Interstate Medical Journal, The.... 235	
FLOYD, FRANK M., Article by.....	145	Intestinal Bacteria, Classification of 457	
Formic Aldehyde in the Treatment of Tuberculosis.....	410	Intestinal Obstruction Following Abdominal Section.....	370
Function of the Spleen, The Physiologic.....	7	IRWELL, LAWRENCE, Article by.... 21	
Future, The Physician of the.....	4	JOHNSON, H. MCC., Article by.....	580
Gangrene, Puerperal, in the Lower Extremities	84	Katatonias	243
Gas-Producing Bacteria.....	42	Koch's Edict	358
GELLHORN, GEORGE, Article by.... 511		LAPSLEY, ROBERT, Article by.....	265
General Consideration of Pulmonary Tuberculosis.....	421	Lecithin in Therapeutics.....	128
General Practitioner and Ophthalmology, The.	365	LÉE, EDWARD WALLACE, Article by 370	
Genito-Urinary Organs, Surgery of the.	138	Lecture on Clinical Surgery.....	237
Gonorrhea, Surgical Complications of 81		Legislation, Consumption.....	582
GRADWOHL, R. B. H., Article by... 9		Leprosy, Report of Case of.....	429

	PAGE.		PAGE.
LESSENGER, W. S., Article by.....	258	NIETERT, H. L., Article by.....	563
LILIENTHAL, HOWARD, Article by..	91	Night School, A New Medical.....	534
Lobar Pneumonia, Insulation Com- plicated by	426	Observations on Influenza, Winter of 1899-1900	58
Locomotor Ataxia.....	361	Ollivier, Death of.....	5
Lowered Birth-Rate in France.....	88	Ophthalmology and the General Practitioner	365
Lupus of Tongue, Report of Case of	147	Oral Indications of Physical Condi- tions	305
LYDSTON, G. FRANK, Article by....	138	Oral Sepsis.....	403
Malaria, Quinine Eosolate in	308	Osteoma of the Orbital Plate of the Frontal Bone, Brain Abscess and Thrombosis of the Cavernous Sinus.....	527
Medical Attention in Public Places..	84	Pancreas, Changes in the, in Dia- betes Mellitus.....	405
Medical Colleges in St. Louis.....	296	Pancreas, Disease of the.....	126
Medical Director of the World's Fair	123, 167	Parable, A.....	293
Medical Interviews in the President's Case.....	455	Paralysis, Post-Diphtheritic.....	86
Medical Library Building, The	233	Parasite of Cancer, The.....	229
Medical Men, Strikes Among.....	171	Parotiditis, Epidemic	130
Medical Night School, A New	534	Pathology of Tabes Dorsalis, Re- view of Literature on.....	465
Medicine and Surgery of the Past 100 Years.....	1	Pemphigus Vegetans in an Infant..	356
Medicine and Surgery of Other Times	14	Penetrating Wounds of the Heart, with Suturing of the Wounds— Report of a Case	563
Medicine, The Il-Litterateur in.....	129	Physician of the Future, The	4
Medicine, New Doctresses of.....	97	Physiologic Function of the Spleen	7
Meeting, American Medical Associa- tion.....	170	Pneumococcus of Fraenkel, Ubiqui- tous	87
Method of Blood Staining, A New..	173	Pneumonia, Acute Lobar, Compli- cating Insulation.....	426
Milk Sugar or Cane Sugar, The Ques- tion of.....	587	Pneumonia, Acute Lobar, Value of Venesection in.....	418
MINOR, THOMAS C., Articles by.. 14,	97	Polyarthritis Deformans in Infancy	49
Missouri State Medical Society Meet- ing.....	174	PORTER, WM., Article by.....	418
MONCORVO, DOCTOR, Article by....	49	Post-Diphtheritic Paralysis.....	86
More Information About the Influenza Bacillus	8	Powder Monkey.....	143
Mosquitos, War on.....	295	Prevention of the Spread of Dis- ease by Rats.....	407
MURPHY, JOHN C., Article by.....	147	PREWITT, F. E., Article by.....	61
MUEHSAM, RICHARD, Article by....	299	Prostatectomy	532
Musical Sensations in Surgical An- esthesia.....	295	Puerperal Gangrene in the Lower Extremities	84
Narcosis, Resuscitation from Col- lapse in.....	297	Purpura Hemorrhagica, The Eti- ology of.....	89
Nephrectomy	180	Pulmonary Tuberculosis.....	421
Nephro-Lithiasis, Some Phases of..	519	Rachitic Children, Head-Knocking of	130
Neurasthenia	411	Report of Case of Leprosy.....	429
Neurosis of the Stomach, Secretory	25	Report of Case of Primary Lupus of the Tongue.....	147
New Chloroform-Oxygen Anesthesia	459		
New Method of Blood Staining....	173		
New Methods for the Application of Old Principles in the Treatment of Fractures and Dislocations.....	104		
New Method of Suturing the Ab- dominal Wall.....	86		
New Test for Sugar	90		

	PAGE.		PAGE.
Resuscitation from Collapse of Chloroform Narcosis.....	297	Tetanus - Antitoxin, Some Facts About	571
Retrogression of Homeopathy.....	46	Tetanus-Infected Antitoxin of Diphtheria	533
Ring-Worm Schools.....	457	Tetanus, The Outbreak of, in Camden, New Jersey.....	585
RODMAN, WM. L., Article by.....	175	Tetanus Toxin.....	169
ROSS, ROBERT M., Article by.....	421	The Cause of the Hemostatic Action of Gelatin.....	584
RUDIS-JICINSKY, Article by.....	187	The Outbreak of Tetanus in Camden, New Jersey.....	585
RUTH, C. E., Article by.....	180	The Question of Milk Sugar or Cane Sugar.....	587
Scales, Green, in Inflammatory Skin Diseases.....	370	Tracheotomy in Breech Presentations	531
SCHMALHORST, M. D., Article by...	367	Treatment of Abdominal Gunshot Wounds	234
School-Children, The Eyes of Our..	183	Treatment of Eclampsia.....	232
SCHWAB, SIDNEY I., Article by.....	465	Treatment of Fractures and Dislocations	104
Secretory Neuroses of the Stomach.	25	Treatment of Tuberculosis, Formic Aldehyde in the	410
Sepsis, Oral.....	403	Tuberculosis a Curable Disease	125
Sero-Diagnosis of Tuberculosis....	234	Tuberculosis, Home Treatment of..	357
SISSON, ELLET O., Article by.....	183	Tuberculosis of the Right Ureter, A Case of Nephrotomy, with Drainage for—Secondary Nephrectomy—Apparent Cure.....	580
Small-Pox, Failure to Report.....	294	Tuberculosis, Pulmonary.....	421
Some Facts About Tetanus-Antitoxin	571	TUTSCHULTE, E., Article by.....	311
Some of the Uses of Electricity in Gynecologic Practice.....	253	Twentieth Century, At Dawn of the	2
Something New on Gas-Producing Bacteria	42	Twentieth Century Wonder	8
Some Phases of Nephro-Lithiasis	519	Typhoid Fever and Appendicitis, Differential Diagnosis.....	409
Some More Information About the Influenza Bacillus.....	7	Typhoid-Like Bacillus	404
Somnambulism	44	Typhoid Bacillus in Water.....	173
Special Branches, Compulsory Study of the.....	531	Ubiquitous Pneumococcus of Fraenkel.....	87
Staining of the Diphtheria Bacillus	128	Ulcer of the Stomach Caused by Diphtheria Bacillus	355
Staphylococcal Enteritis of Breast-Fed Infants.....	456	Use of Silver in Surgery.....	140
Statistics of Cancer.....	293	Value of Colon Bacillus as an Index of Sewage Pollution.....	359
State Medical Association and the Legislature.....	47	Virchow, Rudolf.....	530
Status of Children Practice, The...	45	WALLING, W. H., Article by.....	253
Strikes Among Medical Men.....	171	War on Mosquitos.....	295
Study of Psycho-Physics.....	168	Water Supplies, Municipal.....	535
STEWART, FLOYD, Article by.....	426	Where Does the Absorption of Iron Take Place?	44
Substitutions in Prescriptions....	404	WOHLGEMUTH, HEINZ, Article by...	459
Successful Cataract Operation.....	57	X-Ray Application in Fractures and Dislocations.....	187
Sugar, New Test for.....	90	X-Rays in Dermato-Therapy.....	584
Sunstroke.....	291		
Surgery of the Genito-Urinary Organs.....	138		
Surgery, Clinical Lecture on.....	175		
Surgery and Medicine of Other Times	14		
Surgical Complications of Gonorrhea	81		
Suturing the Abdominal Wall, New Method of.....	86		
Tabes Dorsalis, Review of Literature on.....	465		



